PER

The New York
Academy of Medicine

By Exchange

OFFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

VIRGINIA MEDICAL MONTHLY

Contents

Malpractice, Ernest C. Fisher Jr. . . . 1

Actions for Malpractice, Robert G. Butcher . . . 7

The Doctor as a Witness and his Obligation to the Court, A. Scott Anderson . . . 12

Pyridoxine Hydrochloride in the Treatment of Acute Alcoholism and Delirium Tremens, Edwin J. Palmer, M.D., F.A.P.A. . . . 15

(Continued on page 6)

JAN 10 1955 LIBRARY

HAPPY NEW YEAR

Easy to give . . . and to take

ILOTYCIN DROPS

(Erythromycin, Lilly) Ethyl Carbonate

Unexcelled antibiotic spectrum—notably safe

Meets the exacting demands of

Physician—Mother—Baby

Lilly

Another reason to consider ILOTYCIN FIRST



for the epileptic

Modern diagnostic methods and effective anticonvulsants now help the patient with epilepsy enjoy greater freedom from seizures. And with a more understanding society, greater independence is assured.

DILANTIN® SODIUM (diphenylhydantoin sodium, Parke-Davis)

an established anticonvulsant of choice, alone or in combination, for control of grand mal and psychomotor seizures -- without the handicap of somnolence.

DILANTIN Sodium is supplied in a variety of forms -- including Kapseals® of 0.03 Gm. (½ gr.) and 0.1 Gm. (1½ gr.) in bottles of 100 and 1,000.

LIBRARY
JUL 11 1956
NEW YORK ACADEMY OF MEDICINE
305025

greater independence



Parke, Davis & Company

DETROIT, MICHIGAN

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April 1874)

Published monthly by The Medical Society of Virginia.

PUBLICATION COMMITTEE

Lewis H. Bosher, Jr., M.D., *Chairman and Editor*
Wyndham B. Blanton, M.D. Lloyd B. Burk, M.D.
with
EDITORIAL BOARD
J. Morrison Hutcheson, M.D.
Cato Drash, M.D.
Ennion S. Williams, M.D.
A. Brownley Hodges, M.D.
Hugh H. Trout, Jr., M.D.

The MONTHLY is not responsible for the opinions and statements of its contributors.

All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

Managing Editor—E. SPENCER WATKINS
1105 West Franklin Street, Richmond 20.

Annual Subscription—$2.00 Single Copies—25¢

Entered as Second Class Matter at the Postoffice, Richmond, Virginia, under the Act of March 3, 1879.

THE MEDICAL SOCIETY OF VIRGINIA

OFFICERS

President—CARRINGTON WILLIAMS, M.D., Richmond

President-Elect—JAMES P. KING, M.D., Radford

Vice-Presidents—JAMES W. LOVE, M.D., Alexandria
WAVERLY R. PAYNE, M.D., Newport News
BENJAMIN W. RAWLES, JR., M.D., Richmond

Executive Secretary-Treasurer—ROBERT I. HOWARD, Richmond

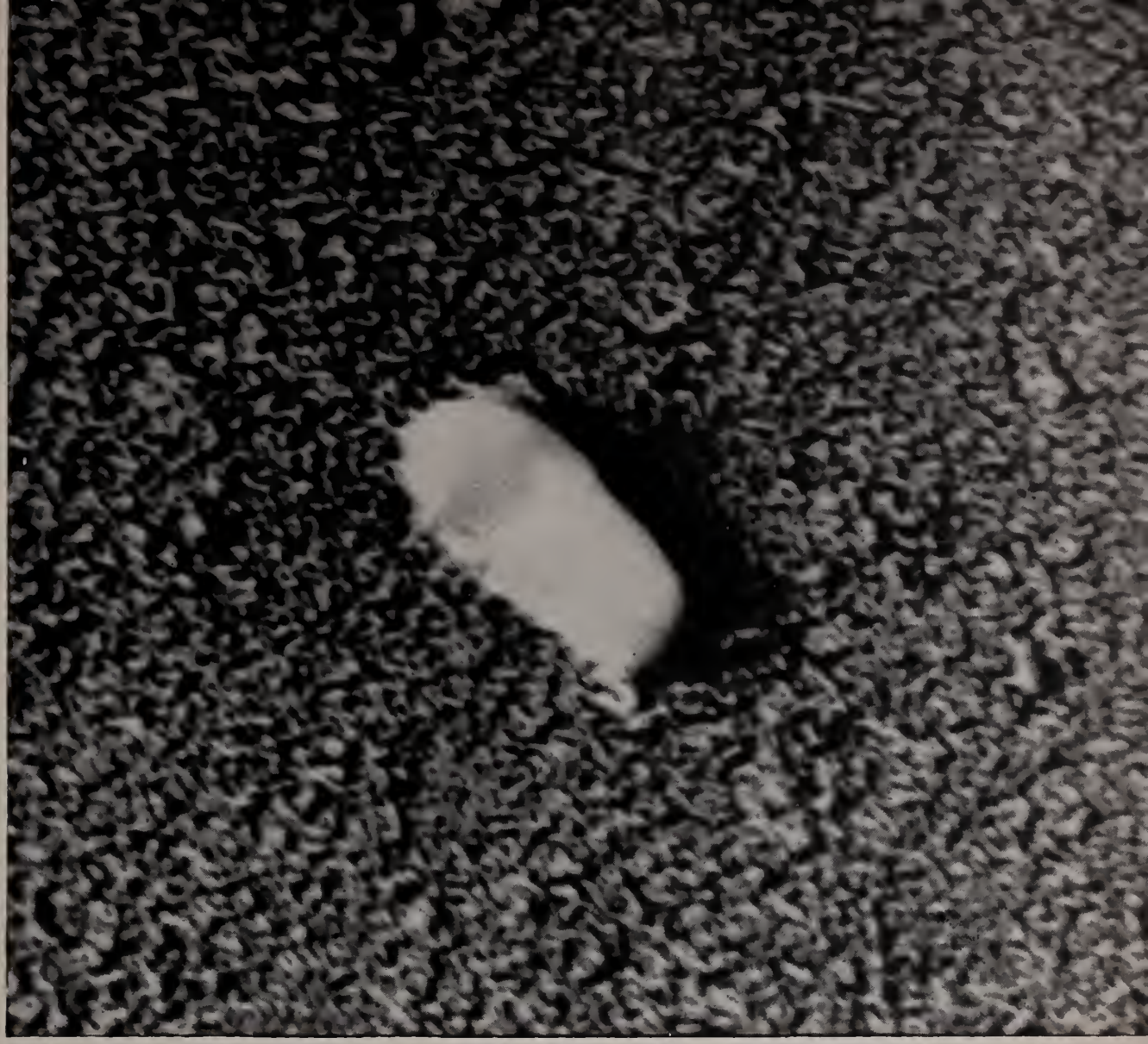
Councilors—A. A. CREECY, M.D., Newport News
WALTER P. ADAMS, M.D., Norfolk
GUY W. HORSLEY, M.D., Richmond
W. J. OZLIN, M.D., South Hill
L. P. BAILEY, M.D., Nathalie
FRANK A. FARMER, M.D., Roanoke
H. W. MILLER, M.D., Woodstock
MCLEMORE BIRDSONG, M.D., Charlottesville
JAMES P. WILLIAMS, M.D., Richlands
HARRY C. BATES, JR., M.D., Arlington

Delegates to A.M.A.
CARRINGTON WILLIAMS, M.D., Richmond
J. M. HUTCHESON, M.D., Richmond

Executive Office—1105 W. Franklin St., Richmond 20.

INDEX TO ADVERTISERS

Abbott ---- 16-17
American Bakers Association ---- 44
American Meat Institute ---- 18
Appalachian Hall ---- 30
Audiphone Company of Virginia, The ---- 11
Audivox ---- 10-11
Ayerst ---- 41
Bayer Company, The ---- 22
Davies, Rose & Company, Limited ---- 12
First and Merchants National Bank of Richmond ---- 6
Garst Bros. Dairy, Inc. ---- 6
Gill Memorial Eye, Ear and Throat Hospital ---- 33
Godwin Nursing Home, Inc., The Louise ---- 30
Imperial Car Distributors, Inc. ---- 8
Jefferson, A. G. ---- 45
Johnston-Willis Hospital ---- 37
Keeley Institute, The ---- 28
Keleket X-Ray Corporation ---- 19
Knox Gelatine Company ---- 14
Lakeside Laboratories, Inc. ---- 7
Lederle Laboratories Division ---- 42-43
Lilly & Company, Eli ---- 26
McGuire Clinic—St. Luke's Hospital ---- 35
Mead Johnson & Company ---- Back Cover
Medical College of Virginia—Hospital Division ---- 30
New York Polyclinic Medical School and Hospital, The ---- 38
Old Gold Cigarettes ---- 25
Parke, Davis & Company ---- 2-3
Patterson's Safe Service Drug Stores ---- 14
People's Service Drug Stores, Inc. ---- 15
Pfizer Laboratories ---- 20-21
Placement Office ---- 6
Plyler's Nursing Home, Mrs. ---- 34
Richmond Eye Hospital—Richmond Ear, Nose and Throat Hospital ---- 35
Richmond Hotels, Inc. ---- 14
Riverside Convalescent Home ---- 37
Riverside Hospital ---- 32
Saint Albans Sanatorium ---- 33
Sealy Mattress Company ---- 10
Searle & Company, G. D. ---- 27
Squibb ---- 24
St. Elizabeth's Hospital ---- 36
Stuart Circle Hospital ---- 34
Terrace Hill Nursing Home, Inc. ---- 32
Thompson Homestead School, The ---- 30
To Our Advertisers ---- Inside Back Cover
Tri-State Medical Meeting ---- 50
Tucker Hospital, Inc. ---- 38
United Insurance Company ---- 49
United States Brewers Foundation ---- 40
Upjohn ---- 5-13-23-29-39-47
U. S. Treasury ---- 48
Valentine Company, Inc. ---- 12
Viceroy Cigarettes ---- 9
Westbrook Sanatorium ---- 36
White Cross Hospital ---- 31
Whittaker Laboratories, Inc. ---- 45
Williams Printing Company ---- 45
Winthrop-Stearns, Inc. ---- 46



ELECTRON PHOTOMICROGRAPH

Klebsiella pneumoniae 39,000 X

Klebsiella pneumoniae (Friedländer's bacillus) is a Gram-negative, capsulated organism commonly involved in various pathologic conditions of the nose and accessory sinuses, in addition to bronchopneumonia and bronchiectasis.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U. S. PAT. OFF.

GRADE A PASTEURIZED PRODUCTS

GARST BROS. DAIRY INC.

GRADE A MILK
HOMOGENIZED MILK (Natural Vitamin D added)
GOLDEN GUERNSEY MILK
GOLDEN FLAKE BUTTERMILK
SKIM MILK—COFFEE CREAM
WHIPPING CREAM—COTTAGE CHEESE
DARI-RICH CHOCOLATE MILK
GARST BROS. DAIRY BUTTER

DIAL 5501

"ROANOKE'S MOST MODERN DAIRY"

DIAL 5501

LABORATORY CONTROL
FOR YOUR PROTECTION

Exceptional Opportunity!

MEDICAL LABORATORY SUPERVISOR

$3,312 to $4,128 Annual Salary

DUTIES:—Supervising and performing laboratory work in connection with patient services.

Explaining and demonstrating laboratory methods and supervising the work of inmate assistants.

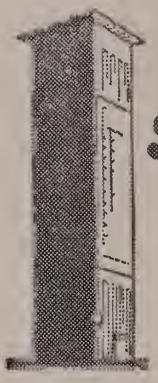
Exercising control over the flow and quality of work performed.

QUALIFICATIONS:—Completion of at least two years of college including basic courses in chemistry and biology, supplemented by completion of an accredited training program for laboratory technicians and two years of medical laboratory experience. Qualifying experience as a laboratory technician may be substituted for the required college education, or additional laboratory, research, or medical training may be substituted for the required experience on an equivalent time basis, provided no substitution is made for at least one year of varied experience in a medical laboratory.

BENEFITS:—Merit increases, retirement plan, vacation and sick leave with pay.

For Further Information Contact:—

PLACEMENT OFFICE, ROOM 304
FINANCE BUILDING, CAPITOL SQUARE
RICHMOND, VIRGINIA



1st

In Every Neighborhood

8 Branches In Richmond

FIRST AND MERCHANTS
NATIONAL BANK OF RICHMOND

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

CONTENTS

(Continued)

The Medical Society of Virginia	18
Public Relations	29
Mental Health	31
Book Announcements	33
Public Health	34
Notes On Pulmonary Tuberculosis	36
Woman's Auxiliary	38
President's Message	40
Editorial	41
Society Proceedings	42
News	42
Obituaries	45

INDEX TO ADVERTISERS—Page 4.

Entered as Second Class Matter at the Postoffice, Richmond, Va.

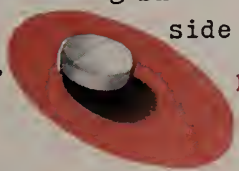


NEOHYDRIN®

BRAND OF CHLORMERODRIN

NORMAL OUTPUT OF SODIUM AND WATER

Individualized daily dosage of NEOHYDRIN -- 1 to 6 tablets a day as needed -- prevents the recurrent daily sodium and water reaccumulation which may occur with single-dose diuretics. Arbitrary limitation of dosage or rest periods to forestall refractivity are unnecessary. Therapy with NEOHYDRIN need never be interrupted or delayed for therapeutic reasons. Because it curbs sodium retention by inhibiting succinic dehydrogenase in the kidney only, NEOHYDRIN does not cause side actions due to widespread enzyme inhibition in other organs.



Prescribe NEOHYDRIN in bottles of 50 tablets. There are 18.3 mg. of 3-chloromercuri-2-methoxy-propylurea in each tablet.

Leadership in diuretic research

LAKESIDE LABORATORIES, INC · MILWAUKEE 1, WISCONSIN

The world-famous XK 120 engine
. . . aerodynamic steel body
and super-strengthened frame
. . . perfect suspension . . . precision steering
. . . sure braking . . . superb "roadability"
under *any* conditions: that's *JAGUAR!*

CONTROLLED POWER

JAGUAR

the finest car of its class in the world



HARPER MOTORS, INC.
901 Preston Avenue
CHARLOTTESVILLE, Va.
Tel. 28191

FOREIGN CAR DIST. INC.
806 Granby Street
NORFOLK, Va.
Tel. 40663

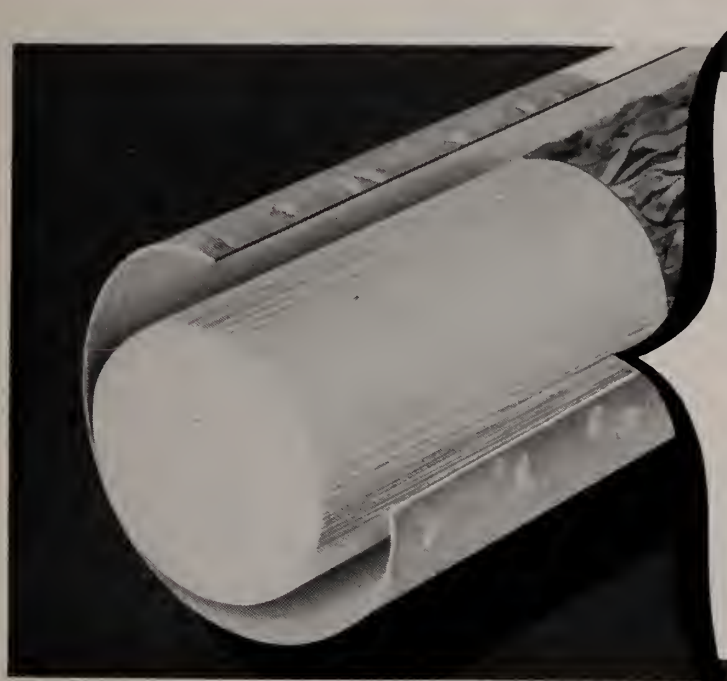
TRANS-PORT SALES & SERVICE, INC.
1010 N. Boulevard
RICHMOND, Va.
Tel. 51775

IMPERIAL MOTORS OF FAIRFAX
Route 29
Nr. FALLS CHURCH, Va.
Tel. Jefferson 43302

IMPERIAL CAR DISTRIBUTORS, INC. Academy and Washington, HAMPTON, Va. Tel. 4383

DOCTOR, WHEN YOUR PATIENTS ASK...

What have VICEROYS got that other filter tip cigarettes haven't got?



The Answer Is

20,000 FILTERS

in Every Viceroy Tip

Only Viceroy has this new-type filter. Made of a non-mineral cellulose acetate—it gives the greatest filtering action possible without impairing flavor or impeding the flow of smoke.

Smoke is also filtered through Viceroy's king-size length of rich, costly tobaccos. Thus, Viceroy smokers get *double the filtering action* . . . for only a penny or two more than brands without filters.

WORLD'S LARGEST-SELLING FILTER TIP CIGARETTE

New King-Size

Filter Tip VICEROY

ONLY A PENNY OR TWO MORE THAN CIGARETTES WITHOUT FILTERS



proof of performance shown by proof of preference



Sealy's Accepted Posturepedic Mattress now*

WORLD'S LARGEST SELLING POSTUREPEDIC MATTRESS

To patients suffering from morning backache due to sleeping on an inferior mattress or improperly fitted bedboards, you may suggest the Sealy Posturepedic, with confidence.

*Accepted for advertising in the Journal of the American Medical Association, Sealy's Posturepedic is now the most widely used mattress of its type in the world. Since it is correctly *firm* it insures proper sleeping posture, gives natural support and complete comfort, too. For patients bothered by "low" morning backache, possibly caused by sleeping on a flabby mattress or make-shift bedboard, you may mention the Sealy Posturepedic *knowing* it is giving helpful relief in steadily increasing thousands of cases.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Sealy

SLEEPING ON A SEALY IS LIKE SLEEPING ON A CLOUD

SEALY MATTRESS COMPANY
Railroad Avenue, Bluefield, Va.
8 South Harvie Street, Richmond, Va.



THOROUGHBRED IN ITS FIELD

Audivox, successor to Western Electric Hearing Aid Division, brings the boon of better hearing to thousands.
These are the Audivox Hearing Aid Dealers who serve you in Virginia. Audivox dealers are chosen for their competence and their interest in your patients' hearing problems.

HEARING is their business!

NORFOLK
Keech Hearing Aid Service
609 Royster Building
Tel: Norfolk 5-4425

RICHMOND
Audiphone Company of Virginia, Inc.
Medical Arts Building
108 North Second Street
Tel: 3-1768

ROANOKE
Keech Hearing Aid Service
137 Grandin Road, S.W.

WASHINGTON, D. C.
Audiphone Washington Company
Room 314 Wyatt Bldg.
777 - 14th Street, N.W.
Tel: Republic 1060

JOHNSON CITY, TENNESSEE
P. L. Gregory & Associates
134 West Market Street
Tel: 3512

KNOXVILLE, TENNESSEE
Tennessee Hearing Service
610 Walnut Street
Tel: 4-8530

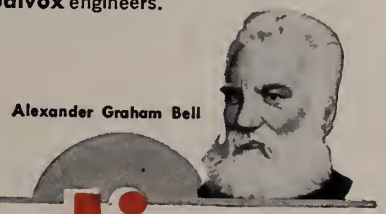
audivox
TRADE-MARK
SUCCESSOR TO
Western Electric
HEARING AID DIVISION



thoroughbred

Only a long and celebrated ancestry can produce a champion racing thoroughbred.

Only **audivox** in the hearing-aid field can trace an ancestry that includes both Western Electric and Bell Telephone Laboratories. **audivox** lineage springs from the pioneer experiments of Dr. Alexander Graham Bell, furthered by the development of the hearing aid at Bell Telephone Laboratories, brought to fruition by Western Electric and **audivox** engineers.



Alexander Graham Bell

audivox

Successor to *Western Electric* Hearing Aid Division
123 Worcester St., Boston, Mass.



all-transistor Model 72 by Audivox

new:

audivox presents a versatile new tool in the psychological and somatic management of hearing loss — the Model 72 "New World." Because it departs completely from conventional hearing-aid appearance, this tiny "prosthetic ear" may be worn as a barrette, tie clip, or clasp without concealment. Resultant benefits include new poise and new aural acuity for the wearer through free-field reception without clothing rustle.

MANY DOCTORS rely on career Audivox dealers for conscientious, prompt attention to their patients' hearing needs. There is an Audivox dealer — chosen for his interest, ability, and integrity — in every major city.

the thoroughbred hearing aid

DIGITALIS

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Company, Limited
Boston 18, Mass.



Whenever the diet is faulty, the appetite poor, or the loss of food is excessive

through vomiting or diarrhea—

Valentine's
MEAT EXTRACT

stimulates the appetite,

increases the flow of digestive juices,

provides: supplementary amounts of vitamins, minerals and soluble proteins,

extra-dietary vitamin B_{12},

protective quantities of potassium, in a palatable and readily assimilated form.

Supplied in bottles of 2 or 6 fluidounces.

***Dosage** is 1 teaspoonful two or three times daily; two or three times this amount for potassium therapy.*

VALENTINE Company, Inc.
RICHMOND 9, VIRGINIA



ELECTRON PHOTOMICROGRAPH COURTESY R.C.A. LABORATORIES

Proteus vulgaris 29,000 X

Proteus vulgaris is a Gram-negative organism commonly involved in

urinary tract infections • septicemia

peritonitis following low perforation of the gut.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U. S. PAT. OFF.

IMPORTANT

PLEASE SPECIFY
KNOX GELATINE
WHEN RECOMMENDING GELATINE

Ordinary gelatin dessert powders are 85% Sugar. **KNOX GELATINE** is sugarless, non-allergenic, and is all **U.S.P. PROTEIN.**

WRITE KNOX GELATINE

FREE BOOKLET "Newer Knowledge in Proteins"
Knox Gelatine Co., Johnstown, N. Y., Dept. VS-1.

The Audiphone Company
of
Virginia

Where you may refer your patients for their HEARING AIDS.

Ethical and Considerate Service.

Experienced Audiometer Testing and selecting of an aid best suited to the individual need.

Border Line Cases a Specialty.

108 NORTH SECOND STREET

MEDICAL ARTS BLDG.

WALTER BROWN

15 Years Serving Washington Doctors and The Hard of Hearing

TELEPHONE 31768

RICHMOND **VIRGINIA**

At All

DEPENDABLE

PRESCRIPTION SERVICE

and

SERVICE TO PHYSICIANS

PATTERSON'S
SAFE SERVICE DRUG STORES

Prescription Specialists

Lynchburg, Va. **Martinsville, Va.**
Danville, Va. **Altavista, Va.**
Winston-Salem, N. C.

The American Way

is peace, prosperity, and goodwill toward our fellow man—to invest our time in educating and learning; and our money in good citizens and fine institutions.



One of the finest institutions of your State is Richmond Hotels Incorporated, one that maintains the highest modern hotel standards . . . one that combines the hospitality and charm of the old and the convenience and comfort of the new.

John Marshall William Byrd
King Carter Richmond
Richmond Hotels Incorporated

One of a Series of Newspaper Ads.
Directed to Your Patients
and Our Customers....



because the new coating dissolves this fast...



Strip of timed photographs shows action of new *Filmtab* **ERYTHROCIN** Stearate in human gastric juice. Within 30 secands, the *Filmtab* coating actually starts ta dissolve. And within 45 minutes the tablet is campletely disintegrated. Because of this swift disintegratian, **ERYTHROCIN** Stearate is absarbed soaner, gives bload levels earlier than the enteric-coated erythromycin.

your patients get high blood levels in 2 hours or less

filmtab*

Erythrocin® STEARATE

(ERYTHROMYCIN STEARATE, ABBOTT)

disintegrates faster than enteric-coated erythromycin

filmtab*

Erythrocin . . . *for faster absorption*

New tissue-thin *Filmtab* coating (marketed only by Abbott) starts to disintegrate within 30 seconds—makes ERYTHROCIN Stearate available for immediate absorption. Tests show Stearate form definitely protects drug from stomach acids.

filmtab*

Erythrocin . . . *for earlier blood levels*

because there's no delay from an enteric coating, patients get high, inhibitory blood levels of ERYTHROCIN *in less than 2 hours*—instead of 4-6 as before. Peak concentration is reached at 4 hours, with significant levels for 8 hours.

filmtab*

Erythrocin . . . *for your patients*

Filmtab ERYTHROCIN Stearate is highly effective against coccic infections . . . and especially useful when the infecting coccus is resistant to other antibiotics. Low in toxicity—*it's less likely to alter normal intestinal flora than most other oral antibiotics.* Conveniently sized (100 and 200 mg.) in bottles of 25 and 100. Abbott

**TM for Abbott's film sealed tablets, pat. applied for.*

Meat...

in Geriatric Nutrition

Although the nutrient needs for optimal health in the aged are not known to differ significantly from those in younger adults,[1] it has been shown that the daily protein requirements in elderly patients vary from person to person. Ascertained values range from below to above allowances recommended for persons in earlier years of adulthood.[2]

According to criteria such as "physical activity, gastrointestinal structure and function, pathologic disturbances, and chemical balances," it is suggested that an optimal diet for the elderly patient should provide at least 20 per cent of its calories in the form of protein.[3]

For several reasons this high intake of protein appears desirable. Decreased activity in the aged tends to induce loss of tissue protein. Preservation of protein enzymes and of endocrinal harmony necessary for supporting anabolic processes requires adequate protein nutrition. Also, the aged person usually is able to handle the end products of protein metabolism satisfactorily.

Generous amounts of tender lean meat can go a long way in supplying the needs of the aged for top quality protein. From 25 to 30 per cent or more of cooked lean meat is protein. Other valuable contributions include the B group of vitamins and essential minerals, especially iron, phosphorus, and potassium. The easy and almost complete digestibility and the palate appeal of meat constitute physiologic values important in the nutrition of the geriatric patient.

---

1. Sebrell, W. H. Jr., and Hundley, J. M.: Malnutrition, in Stieglitz, E. J.: Geriatric Medicine, Medical Care of Later Maturity, ed. 3, Philadelphia, J. B. Lippincott Company, 1954, chap. 13.
2. Ohlson, M. A.; Roberts, P. H.; Joseph, S. A., and Nelson, P. M.: Nutrition and Dietary Habits of Aging Women, Am. J. Pub. Health *40*:1101 (Sept.) 1950.

   Albanese, A. A.; Higgons, R. A.; Vestal, B.; Stephanson, L., and Malsch, M.: Protein Requirements of Old Age, Geriatrics *7*:109 (Mar.-Apr.) 1952.

   Roberts, P. H.; Kerr, C. H., and Ohlson, M. A.; Nutritional Status of Older Women; Nitrogen, Calcium, Phosphorus Retentions of 9 Women, J. Am. Dietet. A. *24*:292 (Apr.) 1948.

   Kountz, W. B.; Hofstatter, L., and Ackermann, P.: Nitrogen Balance Studies in Elderly People, Geriatrics *2*:173 (May-June) 1947.

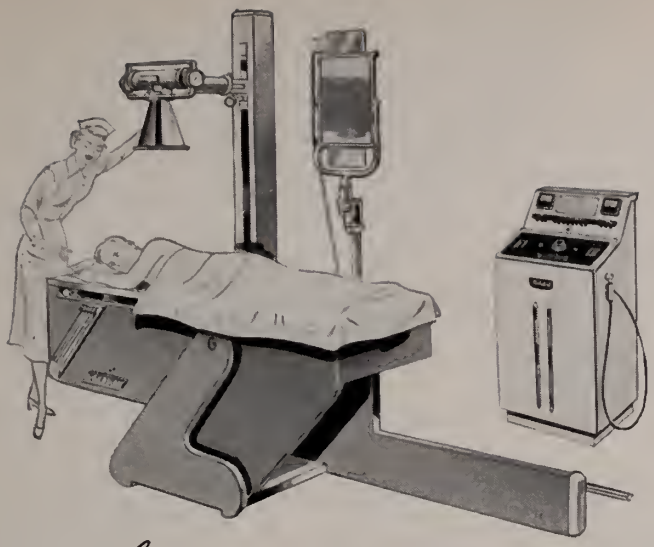
   Kountz, W. B.; Hofstatter, L., and Ackermann, P. G.: Nitrogen Balance Studies in 4 Elderly Men, J. Gerontol. *6*:20 (Jan.) 1951.
3. Freeman, J. T.: Clinical Correlations in Geriatric Nutrition, J. Clin. Nutrition *1*:446 (Sept.-Oct.) 1953.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

American Meat Institute

Main Office, Chicago...Members Throughout the United States



Kelley-Koett
The Oldest Name
in X-ray

designed
especially
for you,
Doctor

the new **KELESCOPE**
combination . . .

FULL SIZE . . .
AUTOMATIC . . .
SAFE . . .
Radiography • Fluoroscopy

100 MA at 100 KV
Full Wave Rectified

DESIGNED BY KELEKET ESPECIALLY FOR MAXIMUM ECONOMY

MINIMUM FLOOR SPACE REQUIREMENTS
Conserves high priced office space areas.
For use in as small as 8 x 10 room.

RADIOGRAPHY IN 2 EASY STEPS:
AUTOMATIC PUSH BUTTON OPERATION
SIMPLIFIED TECHNIQUE

1. check patient for thickness of body part.
2. simply turn kilovolt (KV) knob to desired centimeter (CM) thickness. Check chart for milliampere seconds (MAS) to be used—Press MAS button.

. . . and FLUOROSCOPY
SIMPLE OPERATION • FINE DETAIL VISUALIZATION

KELEKET X-RAY CORPORATION
228-1 West Fourth St., Covington, Kentucky

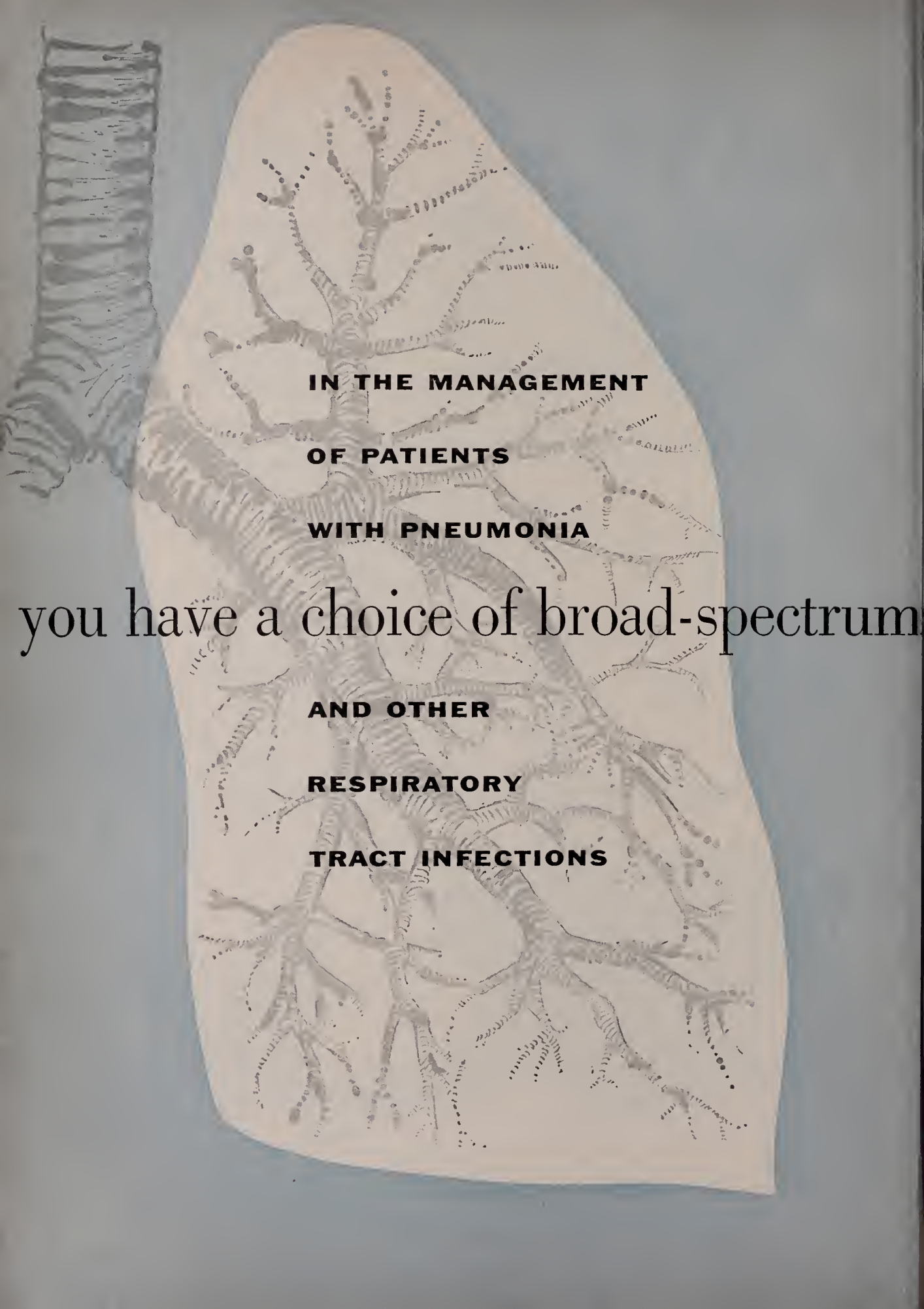


RICHMOND, VA.
1303 Summit Ave.
Tel. 84-4526

BALTIMORE, MD.
301 E. Chase St.
Plaza 2-5222

WASHINGTON, D. C.
107-9 Tower Bldg.
1041 "K" St., N.W. Nat'l 4049

Write for FREE Informative Literature today!



IN THE MANAGEMENT

OF PATIENTS

WITH PNEUMONIA

you have a choice of broad-spectrum

AND OTHER

RESPIRATORY

TRACT INFECTIONS

established

by successful use for more than four years in the treatment of pneumonias and other respiratory tract infections due to susceptible organisms:

TERRAMYCIN®

BRAND OF OXYTETRACYCLINE

"The response [of pneumococcal and mixed bacterial pneumonias in which pneumococcus, Staph. aureus hemolyticus, H. influenzae, E. coli and A. aerogenes were isolated from sputum or pharyngeal secretions] was excellent as manifested by improvement of clinical appearance and fall of temperature to normal" within 24 to 48 hours. "A remarkably high number of infants and young children tolerated this drug very well."[1]

ntibiotics discovered by *Pfizer*

newest

of the broad-spectrum antibiotics for the treatment of the pneumonias and other respiratory tract infections due to susceptible organisms:

TETRACYN®

BRAND OF TETRACYCLINE

"The clinical results in... bacterial pneumonia were generally quite satisfactory" even though most of the patients were over 60 years of age. "Many had serious concomitant diseases such as severe chronic alcoholism, pulmonary emphysema" and other debilitating conditions. "Marked symptomatic improvement occurred in the first 2 or 3 days of therapy with decrease in cough and sputum volume and return of appetite and general sense of well-being."[2]

1. *O'Regan, C., and Schwarzer, S.: J. Pediat. 44:172 (Feb.) 1954.*
2. *Waddington, W. S.; Bergy, G. G.; Nielsen, R. L., and Kirby, W. M. M.: Am. J. M. Sc. 228:164 (Aug.) 1954.*

Pfizer

PFIZER LABORATORIES, *Brooklyn 6, N.Y.*
Division, Chas. Pfizer & Co., Inc.



The Best Tasting Aspirin you can prescribe

The Flavor Remains Stable down to the last tablet

Bottle of 24 tablets 15¢ (2½ grs. each)

We will be pleased to send samples on request

THE BAYER COMPANY DIVISION of Sterling Drug Inc., 1450 Broadway, New York 18, N.Y.



ELECTRON PHOTOMICROGRAPH

Diplococcus pneumoniae 44,000 X

Diplococcus pneumoniae (Streptococcus pneumoniae) is a Gram-positive organism commonly involved in

lobar—and bronchopneumonia • chronic bronchitis • mastoiditis • sinusitis otitis media • and meningitis.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U. S. PAT. OFF.

for greater safety in streptomycin therapy...

DISTRYCIN

Squibb Streptoduocin
Streptomycin and dihydrostreptomycin in equal parts

Distrycin has an important advantage over streptomycin. It has the same therapeutic effect but ototoxicity is greatly delayed. Since the patient is given only half as much of each form of streptomycin as he would have on a comparable regimen of either one prescribed separately, the danger of vestibular damage (from streptomycin) or cochlear damage (from dihydrostreptomycin) is significantly lessened.

Signs of vestibular damage appear in cats treated with Distrycin as much as 100 per cent later than in animals given the same amount of streptomycin.



Cat treated with streptomycin shows no nystagmus after whirling.



Cat given the same amount of Distrycin has normal reflex.

On dosage of 1 Gm. per day for 120 days, ototoxicity was as follows*:

	Vestibular damage % of patients		
	Mild	*Moderate*	*Total*
Streptomycin	12	6	18
Dihydrostreptomycin	6	0	6
Distrycin	0	0	0

	Cochlear damage % of patients		
	Mild	*Moderate*	*Total*
Streptomycin	0	0	0
Dihydrostreptomycin	12	3	15
Distrycin	0	0	0

**Heck, W.E.; Lynch, W.J., and Graves, H.L.: Acta oto-laryng. 43:416, 1953.*

Distrycin dosage is the same as for streptomycin. In tuberculosis the routine dose is 1 Gm. twice weekly, in conjunction with daily para-aminosalicylic acid or Nydrazid (isoniazid). In the more serious forms of tuberculosis, Distrycin may be given daily, at least until the infection has been brought under control.

Distrycin is supplied in 1 and 5 Gm. vials, expressed as base

SQUIBB

a leader in streptomycin research and manufacture

'Distrycin'® and 'Nydrazid'® are Squibb trademarks

FOR THE FIRST TIME!

A FAMOUS NAME BRAND WITH A FILTER!



OLD GOLD FILTER KINGS

The One Filter Cigarette that really Tastes like a Treat.

Here's the first famous name brand to give you a filter. And when you see the Old Gold name on the pack, you know you're getting a quality tobacco product.

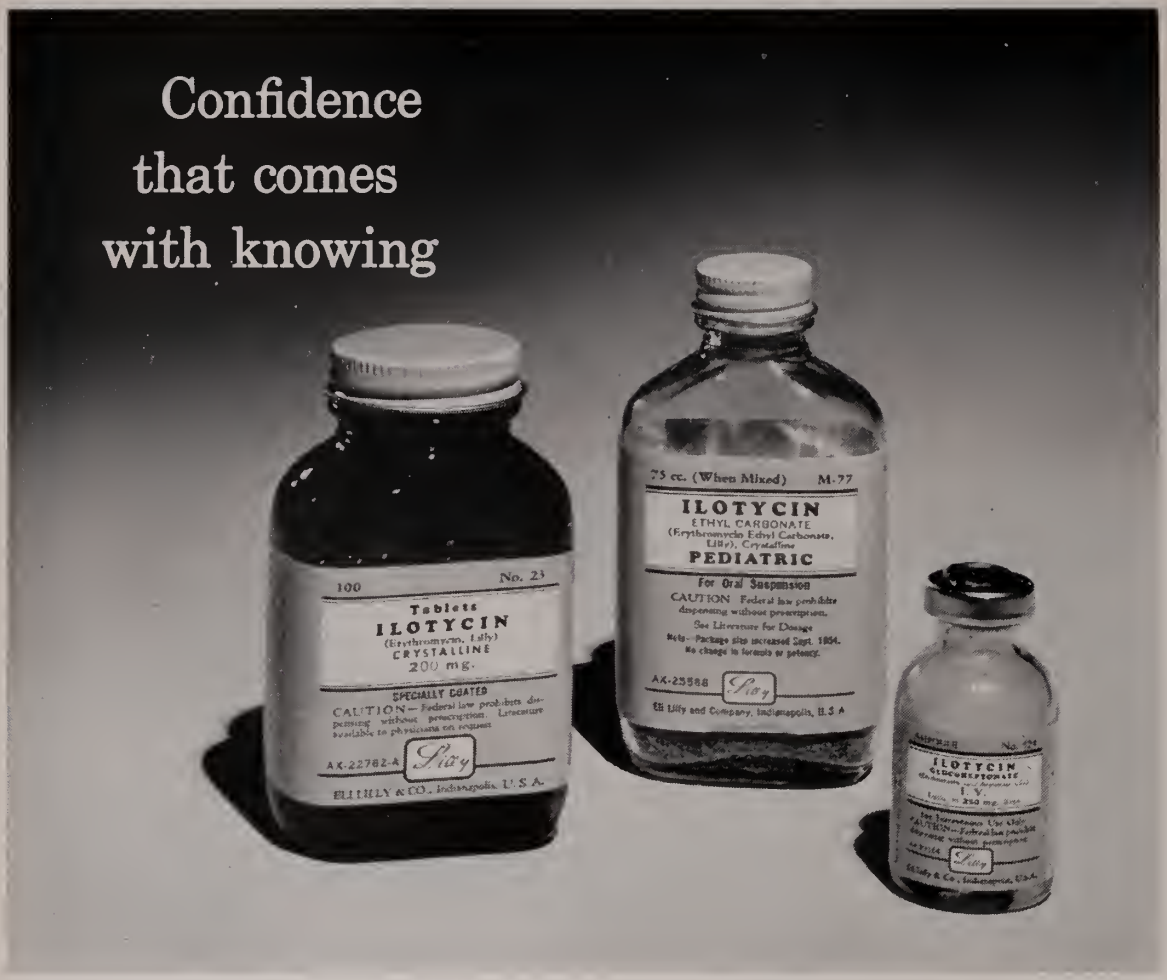
Rich tobacco taste—the Old Gold tobacco men have done it again! The world's most respected tobacco craftsmen have created a wonderful new filter cigarette that reflects every year of their company's nearly 200-year tobacco heritage. Old Gold Filter Kings give you true tobacco taste in every single puff.

On sale now along with the other members of the Old Gold Family—new Old Gold Filter Kings sell at a popular filter price. Whichever kind of cigarette you prefer, just make sure it's one of the family . . . America's First Family of Cigarettes.

True filter—true flavor—The effective filter that lets real flavor through. Pure white . . . never too loose . . . never too tight—this easy draw filter makes every puff taste like a treat.

Doctors: Today Old Gold Filter Kings are sold in most U. S. cities. and our distribution is expanding every day. If your city does not yet have Filter Kings, simply write to P. Lorillard Company, 119 W. 40th St., New York 18, N. Y., and special arrangements will be made to make them available to you.

P. Lorillard Company
Established 1760



ILOTYCIN

(ERYTHROMYCIN, LILLY)

consider ILOTYCIN (ERYTHROMYCIN, LILLY) FIRST

Lilly

QUALITY / RESEARCH / INTEGRITY

How reassuring to know that 'Ilotycin' is an antibiotic with *unexcelled spectrum!* Over 80 percent of all bacterial infections seen in medical practice respond to it. Yet, 'Ilotycin' is *notably safe;* bacterial balance of the intestine is not significantly disturbed. Also, 'Ilotycin' *kills pathogens.* Dead organisms cannot become resistant or spread infection. Since it is a *quick-acting* antibiotic, infections yield rapidly. Finally, 'Ilotycin' is *chemically different;* thus, virtually no gram-positive pathogens are inherently resistant to 'Ilotycin'—even when resistant to other antibiotics.

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U.S.A.

The Virginia
MEDICAL
MONTHLY

January, 1955
Vol. 82, No. 1
Whole No. 1231

Malpractice

ERNEST C. FISHER, JR.
Richmond, Virginia

MY COMPANY and I greatly appreciate your asking me to speak to you today. I consider it quite a privilege. Ever since I was a child, I have had great admiration and respect for the Medical Profession. My Father practiced medicine in Richmond for many years and I had hoped to follow in his foot steps; however, circumstances beyond my control made that impossible.

Not having been able to study and practice medicine, I chose the next best thing and applied to The Aetna Casualty and Surety Company for a position in their Claim Department. Fortunately, I was able to secure it and now for more than twenty years, I have been investigating claims against doctors and preparing them for defense. The work has been most gratifying.

Fifty or sixty years ago, the average patient would have as soon thought of suing his Minister as he would his family physician. The family doctor was an esteemed friend. He was a Father-confessor, a person to whom all the troubles and problems were brought, and his advice was sought along many lines in addition to those concerning the practice of his profession. With the passing of time, however, and the trend towards specialization, this intimate relationship between doctor and patient has not been maintained due to several factors. Due to the lack of this intimate relationship between patients and their physicians, many people look upon their doctors as they do their grocerymen or garage mechanics except that they can tolerate excuses and mistakes from the laymen but they expect their doctor to be some super human individual who can never make an error. If the garageman fails to put oil in the crank case or if the butcher sends pork chops when you ordered veal chops, it is quite all right and an apology will suffice to clear the air. The general public, however, can never make an excuse for a doctor who makes an error, and being human beings, a certain percentage of errors must occur in the practice of any profession.

It has always been our policy to attempt to practice preventive medicine in avoiding claims as well as protect and defend the members of the profession against whom claims and suits have been brought. For the next few minutes, therefore, I am going to try and outline to you some of the things we believe will tend to minimize the ever increasing number of unfounded claims against doctors and dentists. I do not believe that too much emphasis can be placed on the fact that during the last few years, the majority of doctors have been most successful financially due to several factors. (1) Group Hospitalization Insurance has sent people to doctors and hospitals who in the past would not have had the thought of consulting a physician. Even the masses who do not have such insurance have been better off financially in the past few years and many of them have gone to physicians and hospitals who would have suffered in silence and at home had they been financially embarrassed. This has put an added strain and stress on the hospital facilities and the time that the individual physicians have had to give to their patients and while it is very true that a professional man may know that five minutes in the office is sufficient for him to know what the patient needs, the

ERNEST C. FISHER, *Claim Supervisor, Aetna Casualty and Surety Company.*

Delivered before the Richmond Academy of Medicine, Richmond, on October 12, 1954.

average patient does not relish being brushed off and treated impersonally as he, being sick or imagining himself sick, feels that his is the most important case of the doctor's day and that his long tale of woe should be listened to and that sympathy should be poured out upon him. In this manner, many unthinking people feel that they have suffered a personal grievance and then, if an immediate cure is not effected, blame it on the doctor's hurry and impatience. Some feel that the doctor, being well fixed financially, is a perfect target for a claim or law suit and whether they have a real or imagined grievance, they are prone to immediately run to the nearest attorney.

Some proponents of socialized medicine harp upon these matters in an effort to carry their point but all of us who realize the utter absurdity of socialized medicine must band together to defeat it and not through any act of omission or commission give these people ammunition for their warfare. I say to you, therefore, that a little sympathetic listening and applied psychology will do more for some patients, as you well know, than any drug in the pharmacopoeia. This is one way to prevent these claims.

It is a sad commentary indeed on the present state of world affairs that so many people today are looking for something for nothing, that the doctors today, for their own protection, have to be somewhat skeptical about a large number of their patients. One good rule to follow is to treat patients, especially new ones, as potential claimants. It often happens that the patient over whom you worked the hardest and on whom you secured the most amazing results will be the one with the least appreciation and the most ruffled feelings. Frequently, this is caused by ignorance but more often by avariciousness. I recall in Richmond a few years ago a case in which a young man had suffered severe gunshot wounds in his right leg, was carried to a hospital and an outstanding surgeon left his bed at 2 o'clock in the morning, to operate. The leg was beyond hope of being saved and a hasty amputation was done as the patient was in severe shock. His life was despaired of but through faithful medical and nursing care, his life was spared and when he recovered, he was placed in a rehabilitation clinic at no cost to himself where a re-amputation was done in order to provide a suitable flap, an artificial leg was fitted and the patient was rehabilitated. In his ignorance, he thought that because of the re-amputation to provide the flap, that the surgeon who originally amputated his leg did it improperly and accordingly he promptly brought a suit against that man. This may be an exaggerated case, Gentlemen, but our files are full of cases with as little merit. The charity patient is very prone to complain and bring claims and unfortunately, the fact that he was a charity patient makes no difference whatsoever and he has just as strong a chance of making a recovery in dollars and cents as does the patient who is able and willing to pay his bill.

Let me stress what seems to be a cardinal point but one which frequently handicaps us in the proper investigation of claims against professional men. That is the keeping of adequate and detailed records. It is indeed surprising that frequently one of our adjusters calls on a doctor to investigate a claim against him and asks the privilege of looking over his office records and finds how absolutely inadequate they are. We recently had a case of a dentist who had simply recorded on his office card that he had extracted a tooth but he had neglected to say which tooth had been extracted and the patient was then claiming that the wrong tooth had been extracted. Detailed histories are important, as they frequently throw light on the patient's past background and enable us to develop information from physicians who have previously treated the patient that may well defeat the case at hand. The records are just as important from the standpoint of the doctor's own protection as they are for the patient's welfare for the future, and I urge you to maintain such records in your offices and to see that the hospitals in which you practice do likewise. Not only should such records be kept but they should be preserved for a reasonable period of time. The reason for this is that it may be several years after a patient is last seen by you before a claim or suit comes to light. Of course, in the case of a minor, the statute of limitations does not begin to run until the child has reached its majority and in Virginia, the statute of limitations is two years after the time that the patient has become 21 years of age.

Many malpractice claims have been precipitated by a perfectly innocent remark made by some doctor or nurse. The average layman does not understand the professional lingo, so to speak, and may be prone to twist and distort the meaning that you had in mind when you made some innocent remark. We had a case not too long ago involving a typical anesthetic death. The patient was on the table for a simple D & C and suddenly her blood pressure fell and she died, through the fault of no one. The husband of the patient, a few days later, went to call on the operating surgeon and asked him what caused

his wife's death. The surgeon's answer was "It is one of those medical accidents which occur." Of course, it is perfectly clear to you and to me what the surgeon meant, but the use of the word "accident" in the mind of the layman meant that something had happened as the result of somebody's negligence, and he promptly consulted an attorney and brought suit against the operating surgeon. We were, of course, successful in defending the suit; however, had the doctor in that particular case taken a little time to explain to the bereaved husband that deaths of that kind occurred during the administration of anesthesia, that they were unpredictable and unpreventable, and it was one of the phenomena that occurs and one of the risks of the operating room over which no one had any control, he might have saved himself an embarrassing law suit instead of having used the word "accident" which immediately raised the question in the man's mind. Furthermore, your average patient does not understand any explanation that you give him concerning his condition if highly technical terms are used. Were a doctor to tell a patient that he had a severe ecchymosis, he would immediately think he had some dread disease; whereas, if the doctor said to the patient that he had a bruise on his leg and it would be all right in a couple of days, the patient would go on his way rejoicing. It has been our experience that many a claim has been precipitated by too detailed a discussion of symptoms and findings with patients in complicated language; whereas, we have found that the best practice is to reassure the patient in as simple terms as possible, not going into too much detail with him unless you are pressed for this type of information. Frequently, doctors will be misquoted and Mrs. Jones will go home and tell Mrs. Smith that the doctor said she had the worst case of diabetes of the rectum and abdomen that he had ever seen when in all probability the doctor had told the woman that she had diastasis recti abdominis. Many claims arise over back fences when the patients are discussing their ailments with their next door neighbors.

Another thing that we run across very frequently in this business is that the physician in his effort to encourage and reassure the patient will more or less lead the patient to believe that a perfect result is to be expected. At all times, the practicing physician should be constantly on guard not to say anything that could be construed as a guarantee. In all fields of the practice of medicine, untoward results will occur at times, as in the field of orthopedics where no doctor can always be sure that a perfect result will be obtained, as frequently there will be a large percentage of loss of motion or loss of function due to no fault of anyone, but if the patient has been lead to believe that his arm or his leg will be as good as it was before the injury and then he awakes to the realization that he has an impaired member, he may become disgruntled and feel that he had suffered some wrong at the hands of his physician. Another cause of many unfounded malpractice cases is the careless criticism of fellow practitioners. Extreme care must always be exercised in this regard. It has been said frequently that the raising of an eyebrow or an inflection of a voice has planted the seed of discontent in a patient's mind and that he will then imagine that he had been wronged by the other physician who treated him. This is frequently done without malice or without meaning to criticize the fellow practitioner, but it again is one of the things that is frequently misinterpreted by the patient. In all probability when a patient comes to you with a history of previous illness or disease and you question him about who the doctor was who treated the patient prior to his coming to you, you may immediately reach the conclusion that you would have done differently. It may be a perfectly honest difference of opinion and it may be that your opinion is correct and the other doctor was in error, but remember always that he, even though he may have made a mistake, in 99% of the cases did what he honestly thought was right and proper and the mere fact that you let the patient know that you disagreed with the treatment given or the opinion expressed by the previous physician may well precipitate a claim against that doctor. We are most fortunate in having the cooperation of the profession as a whole in the defense of these claims. In Virginia and the Carolinas, the members of the profession are ready and willing at all times to give either their time or their talents to help defend an unfounded suit against another member of the profession, and as long as this remains true, it is for the good of the profession as a whole, for when any one member of the profession starts furthering his own ends by criticism of other members of the profession or if he should be willing to come into Court and testify for a fee to something that may not be altogether true, then you and we are headed for disaster.

Another cause that we have found to be one that precipitates a good many of these claims is the effort on the part of the patient to evade the payment of his bill. If and when at any time you have a patient who appears dissatisfied or appears as a potential

malpractice claimant, oftentimes the delay in pressing the bill until the Statute of limitations for the damage suit has run might be recommended. We do not advocate and never will advocate that a physician let himself be frightened by a potential claim by a patient that he knows is simply trying to avoid paying the bill but the cases to which I have reference are the ones in which maybe some little thing has gone wrong which may be trivial in itself but which the patient may magnify and use as an excuse or as a foundation for a law suit.

If you ever have the unfortunate experience of having a patient come back to you complaining about something you have done with which he or she is dissatisfied, never make any admission or commitments even if the patient's complaint is, in your opinion, somewhat justified. You have no desire to withhold from the patient any information to which he is entitled nor have you any desire to see that the patient does not get everything to which he is entitled, but frequently innocent commitments and admissions in an effort to placate a dissatisfied patient will be used later on by the patient in an effort to say that you had made an admission of liability. In other words, it is good to be alert in situations of this kind.

Frequently, there have been cases where a doctor has received an office call or a letter from some attorney stating that he represented such and such a patient and that he was investigating to see if the patient had a proper claim against the doctor. Sometimes the doctor will sit down and discuss the matter with the attorney or will write him a letter that could be very damaging, for in most cases, the lawyer is simply on a fishing expedition and is trying to find out all that he can in an effort to use it at a later date against the doctor. I say, therefore, that should you receive such a letter or such a call from an attorney that you not answer the letter but turn it immediately over to your insurance carrier, or if the attorney calls in person, that you refuse to discuss the matter with him, stating firmly but politely that he is engaged in the practice of one profession and you in another, and that you would have your representative discuss it with him rather than do it yourself. Another very important point I would like to stress is when the very first inkling that you have of a possible claim for malpractice against you arises, that you promptly report it to your insurance carrier. There are several reasons for this, one being that in the event of a report, your representative will have a chance to decide whether or not an extensive investigation is indicated at that time, or whether or not the matter should best be left alone to await developments. By such prompt reporting as this, you obviate any chance of jeopardizing your insurance coverage by delayed notice, your carrier is in on the matter from the very beginning, and is in a much better position to investigate the matter to protect your interests and the Company's. In many instances, he will be able to so thoroughly investigate the claim that he can secure enough information to discourage the actual filing of a suit. Law suits are expensive and time-consuming and I would hazard the guess that at least 80% to 85% of the claims and suits that are brought against doctors are absolutely without merit. However, there are a few cases which arise due to the human element of error or mistake having occurred and the patient may be due some settlement. In this small percentage of cases, your insurance carrier will never attempt to settle the case without your written consent as your policy provides that we are not at liberty to make a settlement of any claim against you without your written consent. This is the only type of insurance contract that I know of which contains such a provision, and in the cases which arise in which settlement should be made, it is much more advisable to do so if it can be done equitably, than it is to incur the expense of a law suit that well may be lost.

To those who are practicing in rural areas and do not have convenient x-ray and laboratory facilities, the problem is a more difficult one. I say to you, however, that in the event of your having a case which looks like it is very much out of the ordinary or if you are in doubt about your diagnosis, then assurance can be made doubly sure by referring the patient to the nearest location where such facilities are available. We have lost several cases in rural areas where the physician relied entirely upon his findings without the taking of x-ray films, doing blood counts, blood chemistries, etc. Again, this is a precaution which should be taken as much for the doctor's protection as for the health of the patient.

It seems almost unnecessary to advise you that when you are operating on a patient be sure you are operating on the patient you intended to operate upon. That sounds silly on the face of it, but I will tell you what happened twice recently in our experience. Not too long ago a doctor came into the hospital in the morning to perform a T & A on a patient who had been posted. He went to the operating room, scrubbed and the orderly rolled in a patient. The doctor proceeded to remove the child's tonsils and

adenoids and the operation being complete, the patient was returned to his room in good shape. Suddenly, to the consternation of everyone concerned, it was found out that through error the orderly had brought the wrong patient to the operating room; the child on whom the surgeon had operated was in the hospital for an entirely different complaint, and the patient who was posted for the T & A was still the proud possessor of his tonsils and adenoids. Of course, the patient who had lost his tonsils and adenoids had not been harmed in any way, but the parents put up a loud squawk, claiming that the child did not need the operation and had been subjected to anesthesia and to other surgical hazards and were demanding large sums of money.

Another example of identifying the patient was brought to our attention in Virginia recently when our policyholder posted a patient for an appendectomy. He had another patient upon whom he was to perform a vas ligation on the same day, and got the two confu ed in his own mind. The patient who was supposed to have his appendix removed was brought to the operating room; the surgeon promptly performed the vas ligation and it was not until the operation was completed and the patient was back in his room that the mistake was discovered. Needless to say, the patient, a 33 year old man, was very irate and a law suit resulted.

It seems almost fantastic to say to a doctor, "be sure and identify your patient before you operate," but the two examples cited above will show you what can happen when this is not done.

We do not handle claims against professional men as we do automobile claims. It is all well and good for us to send an adjuster out and find out that Bob Brown had had an automobile accident and we feel that it is cheaper to settle it than it is to defend a law suit. By settling this claim, we are not casting any aspersion whatever on Mr. Brown, because anyone who drives an automobile can be involved in an accident and the claim can be settled without casting aspersions upon his driving ability, his professional ability, his character or his mentality. However, when we settle a claim against a doctor or professional man, we have to admit that he was negligent in some manner or we would not be settling the claim against him. That is one of the reasons that the policy provisions to which I referred a few moments ago are written into your policy and it is for that reason also that these cases are so carefully investigated and prepared. I know it must irk you, frequently, when you have a waiting room full of patients to have an insurance adjuster come to your office and say, "Doctor, your colleague in the adjoining town is being sued and we understand that you treated this patient a year or more ago, and we would like to consult with you about your findings, your treatment, and the patient's general condition." Yes, you are busy and you haven't really the time but you want to cooperate, and you do. The doctor in whose behalf you are spending your time appreciates it, just as you would appreciate it if the shoe were on the other foot. Our men do not like to take up your time unnecessarily, but we feel that in making detailed and careful preparations for the defense of these cases, we are not only serving the individual involved, but serving the medical profession as a whole, and I am sure that you realize this because you cooperate with us so splendidly in the investigation of these cases.

To digress momentarily, you might be interested in an occurrence which took place in Richmond a few years ago. A very close friend of mine who is a general practitioner was visited one morning by a young woman he had never seen before. She stated that her husband was in the Marine Corps and until he could establish a residence for her in Quantico, Va., she was temporarily visiting friends in Richmond. She had been walking up the street, had seen his sign and come in, as she was having some vaginal discharge and wished him to treat her for it. The doctor made a diagnosis of leukorrhea; the smear was negative; the young lady paid for the office visit and left after the treatment, and nothing further was heard from her until about six months later. The doctor then received a letter from her husband stating that he understood that his wife had been treated by this doctor while she was in Richmond, that she now had gonorrhea and that he was making claim against this doctor, as his wife stated that he had treated her with unsterile instruments. Immediately upon receipt of this letter, my friend called me by telephone and read it to me and asked what he should do. I suggested to him that he write a very courteous letter of denial to the husband of the patient on his stationery, but send it to me for perusal before letting it go out to the Marine Sergeant. He prepared such a letter and sent it to me, and I think I can quote it verbatim because I have told this story so frequently. The letter read as follows: "My dear Sergeant Jones: I have your letter of such and such a date and have noted with a good deal of interest your wife's allegations. I did treat her in my office, it is true, but I did not use unsterile instruments.

If that is your wife's story, it is a good one, and I don't blame her for sticking to it. As far as I am concerned, you can sue and be damned. Yours very truly." Immediately upon reading this letter, I called the doctor and told him that by no means should he send out such a letter, that that in itself would precipitate a claim and would infuriate the husband of the patient. He insisted, however, that he was going to send out this letter, even it it voided his coverage with us, and I told him that if he were that stubborn, I would go along with him and to send the letter out. Believe it or not, no further word has been heard from the Marine Sergeant or his wife from that day to this. I am not recommending, however, that you Gentlemen write any such letters as that, even though I can hardly blame my friend in Richmond for his attitude.

909 State Planters Bank Building

Child Killer Can Be Prevented.

A "vaccine" has been prescribed for the major killer of children—accidents. Between 11,000 and 13,000 children are killed each year, and 40,000 to 50,000 are permanently injured by accidents. Accidents cause more deaths of youngsters than the next five or six most important causes combined. But Dr. Harry F. Dietrich, Beverly Hills, Calif., pediatrician, said that accidents—like diseases—can be prevented and treated with the right vaccine.

The vaccine consists of protection and education before the child even starts school, Dr. Dietrich said in the November 6 Journal of the American Medical Association. It must be given at the preschool age because this is when a child's behavior and personality are shaped and it is also when one-half of all fatal accidents occur.

"Up to the age of 12 to 18 months the infant needs complete protection from all accident hazards. If he is burned, drowned, crushed, poisoned, or mangled he has been denied that protection." " . . . consider the child's situation at age 5 or 6 when school and play take him away from the protective devices of the home. His safety now depends on what he has learned. Whether or not he dashes blindly into the street, stumbles into a water-filled quarry, ignites a pile of rubbish, loses his arm in some power machinery, or drinks from a bottle filled with paint thinner, depends on what his parents taught him between the ages of 1 and 5.

"It must be apparent that after the age of one, protection must gradually be reduced and replaced by education. While still maintaining protection against subtle and incomprehensible hazards, parents must begin to teach the child to do safely all of the things he wants to do and is capable of doing.

"Protection is primarily intended to keep the child unharmed until he is able to be taught." Children must learn to live safely "with, rather than without" such things as fire, machinery, electricity, and chemicals. The application of accident prevention in the home requires three tools: "forethought, time, and discipline."

In addition to home protection and education, Dr. Dietrich suggested improvements in adult education, accident prevention courses in medical schools, legislation, improvements in packaging and labeling insect poisons and medicine, and possible control of inflammability of children's clothing. But he said "even brief consideration of the motor vehicle accident situation will keep us from placing too great dependence on laws." The problem must be solved instead by the medical profession and parents, because of "the devastating toll that accidents are extracting each year."

Actions for Malpractice

ROBERT G. BUTCHER
Richmond, Virginia

I HAVE been asked to talk to you tonight, having no specific subject assigned to me. Since I am totally ignorant of the intricacies of the practice of medicine, and since I hold myself out as a practicing attorney, I assume that I am expected to make some remarks about the law as it pertains to the practice of medicine.

The law, of course, enters into and has something to do with the practice of any business or profession, but I shall endeavor to restrict my remarks to the law which pertains to claims or actions against physicians, surgeons and dentists for malpractice.

Although my remarks shall be equally applicable to physicians, surgeons and dentists, for the sake of brevity I shall refer only to physicians or doctors.

Comparatively few lawyers, fewer doctors and practically no laymen know or understand the conditions under which a doctor may be held liable for malpractice, and this failure to understand frequently gives rise to claims or actions against doctors.

Malpractice results from: (1) the failure of a *doctor to possess the requisite knowledge and skill* necessary to meet the situation which confronts him; and (2) the failure to properly apply or exercise the knowledge and skill which he possesses, although the doctor may possess the requisite knowledge and skill.

Although the pleadings in malpractice cases almost always allege a lack of skill, and allege that the doctor failed to possess the requisite knowledge and skill, there are very few cases within my knowledge where such a contention has been the basis of a recovery against a doctor. In this day of specialists, and the discovery of new techniques and treatments, this rule, however, may be more important.

In my own experience I can recall one case where the failure of the defendant doctor to possess the requisite knowledge and skill to properly cope with the situation facing him could have been a solid foundation upon which a judgment against the doctor could be supported.

If a doctor is confronted with a situation with which he is not familiar, he should not guess at a procedure to be followed but should avail himself of the advice of experts, or else refer the patient to some one possessing the necessary knowledge or skill.

I shall later touch upon the general rule that a doctor is not liable for errors in judgment. This rule, however, will not protect a doctor when he is confronted by a situation which is new to him and cannot be readily diagnosed by him, but he nevertheless ventures a treatment or an operation on a mere hazard with the hope that he may be right.

Most claims or actions for malpractice boil down to whether the doctor properly applied or exercised the requisite knowledge and skill which he possesses.

In order that the plaintiff recover, he must prove that the defendant has been guilty of malpractice or has been negligent according to the rules of law laid down for testing a doctor's negligence.

In the absence of some express contract, a doctor does not undertake to insure a good result, or to cure his patient, but he undertakes only to use ordinary care according to the laws laid down to measure the doctor's conduct.

Some of you may wonder what is meant by the exclusion "in the absence of some express contract". In rare cases a doctor may tell his prospective patient in substance, "In six weeks of treatment and a fee of $------, I will cure you of your arthritis". If the treatments are given pursuant to this conversation and the doctor fails to cure the patient he has been guilty of a breach of contract, and the law governing his liability for negligence has no application. Such an action could be founded in contract for breach of contract rather than in tort for negligence. There are many differences in the two types of cases, one of which is that in an action for breach of contract the statute of limitations is 3 years, whereas in an action for negligence under the most recent Legislative amendment, the statute of limitations is 2 years as to any causes of action which may arise after July 1, 1954.

Not long ago we had a case where a young couple thought that they were having children too rapidly. At the wife's urging the husband engaged a doctor to sterilize him. After an operation the doctor assured the patient that he, the patient, had been sterilized. Later on the patient's wife again became preg-

ROBERT G. BUTCHER, *Lawyer with the firm of Parrish, Butcher, Parrish and Hening.*

Delivered before the Richmond Academy of Medicine, Richmond, on October 12, 1954.

nant, and the husband, in order to prove his wife's infidelity, consulted another doctor who found the husband to be *not* sterile. These facts, in my opinion, would have given rise to an action based on breach of contract. If the doctor had performed the operation without any negligence on his part there could have been no action for malpractice. This claim was presented, but it never came on for trial. It may be that upon second thought the husband was hesitant to go into court seeking damages because his wife was going to have a child by him. Even if he had had the courage to bring such an action on for trial, the damages, if any, suffered by the husband would be extremely difficult to ascertain.

As above stated, a doctor does not undertake to insure a good result or to effect a cure and a bad result, of itself, is no evidence of negligence. In spite of this, however, many malpractice claims arise simply because of what is thought to be a bad or unsatisfactory result. They frequently start with the dissatisfaction of the patient. The patient, being dissatisfied with the result, consults another doctor who sees the bad result but does not know the history of the case. This doctor, applying his hindsight rather than his foresight, thinks of and mentions certain things which, in his opinion, might have been done and which would or might have produced a more satisfactory result. These remarks are construed by the patient as a criticism of the former doctor, and, in some cases, that is what is intended. Thus the seed for a malpractice claim has been planted. The action of the second doctor has not only stirred up a malpractice claim, but if he is called upon as a witness and is shown the whole picture, he is forced to "change his tune". Such cases have caused plaintiffs' attorneys to say that the doctors have a close organization designed to protect each other, simply because one doctor has expressed some opinion while not acquainted with all of the facts and is forced to change his opinion when he becomes acquainted with all of the facts.

A doctor in treating a patient is required to possess and exercise such care as is ordinarily possessed and exercised by other physicians in good standing practicing in the same general line in the same or similar localities. It is by this standard that a doctor's conduct must be measured. According to this standard it is obvious that a doctor practicing in Richmond, a large medical center and the seat of medical education, furnishes no fair standard for judging the professional conduct of a doctor practicing in Emporia.

In a law action the judge determines the law and the jury determines the facts from the evidence it hears. The law, as determined by the judge, is applied to the facts as determined by the jury, and from these determinations comes a verdict for the plaintiff or the defendant.

Medicine is a science (though not an exact science) and jurors are not scientists. The law, therefore, does not permit a jury to set up its own standard and to let their own unscientific opinion be the basis of their verdict. In this connection, the jury must be guided entirely by the testimony of such doctors as have testified and who are in good standing and familiar with the usual and approved practice prevailing in similar cases in similar localities.

Thus in the average case the testimony of some qualified doctor is necessary to lend support to a verdict for the plaintiff.

This, however, is not always true. Some cases may rest upon evidence of a non-scientific nature. An illustration of this will, perhaps, save time in explaining what is meant.

We have now a case where a plaintiff was involved in an automobile accident. When he was taken to the hospital he was found to be in shock and suffering from a compound, comminuted fracture of the left tibia. All of the doctors who saw and treated the patient stated that at no time did the patient complain of any pain in the hip, and all the hospital records failed to show that any such complaint was made. On the other hand, the plaintiff says that he constantly and continuously complained of pain in the hip, as do the members of his family and others. The patient was later sent to the hospital at Louisa, his home. About four months after the accident the patient went to another doctor, complaining of pain in his hip, and x-rays taken or caused to be taken by this doctor revealed a fractured hip.

All of the experts agreed that even though the plaintiff had been subjected to severe trauma, in the absence of any complaint of any pain in the hip, good practice did not dictate x-ray of the hip, but if under the same conditions the patient did complain of pain in the hip, then good practice dictated x-ray of the hip.

Thus, the decision of this case will hinge upon whether or not the jury believes that the patient did, in fact, complain of pain in his hip. The answer to this question will not depend upon expert testimony.

In order to recover, plaintiff must not only prove that the defendant was negligent, but must also prove

that the negligence proximately caused the condition complained of. In considering the question of proximate cause, the jury must also be guided by the evidence of experts, unless the answer to this question can be gotten through the use of non-scientific testimony.

I might say here, as well as anywhere else, that, in my opinion, the courts generally are gradually liberalizing their views in favor of the claimants, the effect of such liberalizing being to make it less difficult for a plaintiff to recover from a doctor for malpractice. In a fairly recent Virginia case, all of the expert testimony was to the effect that the witnesses could not say whether or not the plaintiff's loss of vision was caused by syphilis or by the use of tryparsamide. The court said that the jury, in considering the question of proximate cause, could take into consideration testimony other than expert testimony, such as the length of time which plaintiff had had syphilis with no eye trouble, and the interval which intervened between the first administration of tryparsamide and the development of the eye trouble. This evidence was, of course, non-medical, but the court permitted the jury to consider it. The strength of this decision, however, is somewhat weakened by the holding of the court that the defendant had committed himself to one of two methods, one of which was the continued use of tryparsamide. The court held that having selected one method, the doctor was obligated to follow this method without negligence, but in this case he did not even properly follow the method selected by him.

There have been many other methods of liberalizing the rules by the court, but time does not permit me to mention or discuss them.

If there are two or more accepted and approved methods of treating the same condition, and the doctor, in the exercise of his honest judgment and without negligence on his part, adopts and uses one of such accepted and approved methods, he is not negligent, even though the adoption of one of the other methods might have obtained a better result. As above illustrated, however, the method adopted by the doctor must be followed by him without negligence on his part. Frequently, there are two or more accepted methods of treating the same condition. One doctor, for reasons personal to himself, may prefer one method while another doctor for similar reasons may prefer another. I am sure that many of you doctors here in treating a certain condition have a method which you personally prefer while you recognize that there are other methods accepted and approved which are proper and used by other reputable and skillful doctors. Because doctors differ in this respect does not mean that either of them has been guilty of negligence.

Another apparent exception to the rule requiring expert testimony to support a verdict in favor of the plaintiff is a case where the court permits the application of the rule known as *res ipsa loquitur.*

Res ipsa loquitur means that when a thing or instrumentality is shown to be under the management or control of the defendant and the accident is such as in the ordinary course of things does not happen if those who have the management and control use proper care, the injury, itself, affords reasonable evidence, in the absence of an explanation by the defendant, that the accident arose because of the want of care.

To illustrate: In the use of a hot water bottle by a doctor the patient suffers a burn, in the absence of some explanation by the doctor, no expert testimony is necessary to establish that the burn was the result of negligence. Here the doctor had the exclusive control over the hot water bottle and it is common knowledge that a hot water bottle, when properly used, does not cause injury. Thus, there arises an inference that the hot water bottle has not been properly used, and the doctrine of *res ipsa loquitur* is properly applicable.

The Virginia courts have steadfastly refused to apply this doctrine to malpractice cases against doctors, and apparently they are still adhering to this rule. We once had a case where a female patient submitted herself to a specialist for the performance of a tonsillectomy. A general anesthetic was administered to the patient. Before the patient went under the anesthetic she possessed all of her teeth, but when she regained consciousness several of her teeth were missing. Although in this case the specialist had complete control and management of the operation and the instrumentality used in connection therewith, and although the patient was under a general anesthetic and, therefore, unable to know anything about what was done or what the doctor failed to do, the court refused to apply the doctrine of *res ipsa loquitur* and stated it was necessary in order for the plaintiff to recover that she prove by expert testimony facts to show that the specialist had been guilty of negligence.

Until recently the courts have refused to apply this doctrine in cases against hospitals for negligence. In a comparatively recent case, however, the Virginia Supreme Court has approved the application of this

doctrine as to hospitals under certain circumstances.

In this case a new-born baby was burned by a hot water bottle. The time when the baby must have suffered the burn was shown by the evidence, and it was further shown that from the time of birth until the burn was caused, the hospital had exclusive control of both the bottle and the baby. The court held that this was a case where the doctrine of *res ipsa loquitur* was properly applicable.

There are ways in which a doctor may render himself civilly liable other than by being guilty of malpractice as heretofore discussed. The performance of an operation without the patient's consent may amount to an assault and battery, and in such cases punitive damages in addition to compensatory damages may be awarded against the doctor. Compensatory damages are designed to compensate the plaintiff for the damage which he has sustained, whereas punitive damages are designed to punish the defendant, and in proper cases may be awarded in addition to compensatory damages.

An assault and battery may be, and frequently is, innocently perpetrated. Not long ago we had a case which involved two eye specialists, Drs. A and B. At a social gathering these two doctors, as professional men often do, began to "talk shop". The subject under discussion was an operation to cure cross-eyes. It developed that the two doctors employed a different technique in performing this operation. Dr. A, the younger of the two, had a greater amount of experience with this type of operation because of his medical experience in the service. The older man, Dr. B, was impressed with the technique described by Dr. A in that it was calculated to be quicker than the approved and accepted method used by the older Dr. B, and thus made it necessary to keep the patient under an anesthetic for a shorter length of time. Dr. B asked Dr. A to be present at Dr. B's next operation of this nature in order that Dr. A could teach Dr. B his method. After the patient had been put under a general anesthetic and when Dr. B was about to begin his operation with Dr. A present, he suggested that Dr. A actually do the operation, stating that Dr. B could learn as much by Dr. A performing the operation as he could learn by doing the operation himself under Dr. A's instructions. Furthermore, if this were done it would be completed more quickly. Thereupon, Dr. A. actually performed the operation and when the operation was just completed the patient died while under the anesthetic. Dr. A was sued for assault and battery. We could not argue that the defendant was not guilty of assault and battery because he had admittedly performed the operation upon the patient without securing the patient's consent. Fortunately, the court decided in favor of Dr. A on the ground that, although the doctor was guilty of assault and battery, it had not been shown that the death resulted from the assault and battery.

Doctors are often faced with perplexing questions in this connection.

We were asked by a doctor as to his duty under the following facts: A doctor was to perform a necessary and very serious operation on a female patient. He realized that during the course of the operation it might become advisable and even necessary to give to the patient a blood transfusion. All of this was thoroughly explained to the patient, but she flatly refused to permit any transfusion. She was apparently a member of some faith who believed that the injection of someone else's blood into her system would prevent her from going to heaven.

We were forced to advise the doctor that to give a transfusion under such circumstances would amount to an assault and battery.

What then should the doctor do? It is the duty of the patient to cooperate with the doctor and to conform to his prescriptions and directions. It follows that if the patient refuses to conform to the prescriptions and directions of the surgeon, knowing the necessity therefor, the surgeon may properly refuse to perform the contemplated surgery.

The patient should be fully informed by the doctor of the significance of his refusal to follow instructions, but if after such an explanation the patient still desires the doctor to proceed, the doctor should make it clear that the patient assumes the consequences resulting from the refusal to follow the doctor's instructions.

From the standpoint of a possible law suit, however, to proceed under such circumstances is hazardous, and, in the event of trial, the plaintiff will probably produce evidence to show that the doctor did not fully explain the matter to the patient and thus an issue of fact will be raised for the determination of a jury. In any such case it would seem advisable in any event to first hold a consultation with a disinterested doctor before proceeding further.

In this talk I have, of course, barely touched upon the subject of a doctor's civil liability. From what I have said it would seem that the law relating to a doctor's liability is comparatively simple, but there are many phases of this law and many kindred questions of law which may and do arise in the trial of

a malpractice action. We were once engaged in the trial of a malpractice action which lasted for three weeks. Of that three weeks we spent at least three-fourths of our time in the judge's chambers arguing questions of law which, of course, had to do with the pending malpractice action. I have, however, probably already consumed more time than it was contemplated I should consume and if I have transgressed in this respect I offer to you my apologies.

1208-15 Mutual Building.

How to Avoid Ulcers.

Anyone can get an ulcer. It's not a merit badge for the hard-working man, but a common disease that can strike anybody who doesn't take the trouble to avoid it. The main strains that lead to ulcers are emotional, but most ulcers (if not all of them) can be warded off, according to Dr. John E. Eichenlaub, of the University of Minnesota School of Medicine, He tells how to avoid ulcers in the October Today's Health magazine, published by the American Medical Association.

The emotions you "swallow" are more important in causing ulcers than the ones you openly express. Resentment, feelings of being wronged or unappreciated, and insecurity are the biggest ulcer causers. These are especially abusive to your stomach if they are given no outlet in words or action. "Avoiding these feelings, spreading them out so they don't pile insult upon insult in your stomach, and giving them healthy outlets are the keys to warding off an ulcer." "These things, plus a few changes in your habits if your problems are many and hard to handle, will do the job."

He gave three rules for stopping an ulcer before it starts. First, steer clear of situations that cause these emotions. Say no to excessive demands by others. Second, change your attitude about keeping it to yourself if somebody steps on your toes or asks too much of you. Sound off. Take it easy, do your best, and what you do will be good enough. Third, and most important, find outlets or antidotes for resentment, frustration, hurt, and inadequacy. Convert these feelings into action or air them in conversation.

Dr. Eichenlaub suggested smashing at a golf ball, beating a carpet, or entering into competitive sports and constructive hobbies to "work off" these bottled-up feelings. If you can't do this right away, make a mental note of something that upsets you, and work it off later.

"Two other simple steps are worth taking when stress is great, however. If you find tensions piling up on you, take a glass of milk. . . . And be sure to avoid those straws-that-break-the-camel's back, excess alcohol and tobacco, at times of extreme stress."

New Booklets on Community Health Planning.

With an eye to better health at the community level, AMA's Council on Medical Service has prepared two attractive new pamphlets dealing with health leadership and community health planning. (1) "The Key to Community Health" describes community health councils—offers how-to-do-it information on organizing and operating them, with helpful hints for mobilizing community leaders to action. (2) "Main Line Route" was designed primarily for woman's auxiliaries—outlines 10 suggested public service projects such as emergency call plans, promotion of voluntary health insurance, maternal and child care programs. . . .

Both booklets may be obtained by writing directly to the Council.

The Doctor as a Witness and his Obligation to the Court

A. SCOTT ANDERSON
Richmond, Virginia

IN THIS day of the automobile with consequent accidents causing personal injuries to thousands of people and frequently resulting in death or permanent disability, the doctor is being called into the courts more and more as a witness to prove certain facts concerning the injury and the medical expenses incident thereto.

In addition to this, every accident occurring in industry necessarily is reported to and reviewed by the State Industrial Commission for the purpose of fixing the percentage of disability, the weekly compensation due the workman and the medical expenses to be paid. This necessitates the attending physician furnishing to the Commission medical reports, bills and his opinion concerning the disability of the employee, either in writing or by direct testimony; sometimes by both.

Since the last war there has been a widespread increase in the sale of accident and health insurance, as well as many other insurance coverages. Insurance companies, of course, require proof of injury and disability and medical expenses by a doctor's report and certificate or by sworn testimony in court.

Generally more important than any of the factual evidence above mentioned is the inevitable request for the doctor to give his opinion as a medical expert on the significance of the injury and his prognosis as to the future outcome. So much so is this true, that most of the medical schools now give courses in Medical-Jurisprudence and even require the attendance of medical students, as observers, in court during the course of an entire trial of a case in order that the future doctor may be better prepared to meet his obligation as an expert witness.

In view of these present day demands on the medical profession as witnesses in legal matters, it may be of some interest to doctors to know a little about the legal mechanics of a doctor becoming a witness before the court or some board or commission having jurisdiction to summons witnesses.

The following may be very rudimentary from a legal point of view but nevertheless somewhat helpful to the doctor who has not been accustomed to serving as a witness in court.

Richmond, because of its size, importance and the fact that it is the capitol of this state, has a great number of courts, Federal and State, boards and commissions located here. There are seven inferior courts such as police courts, civil justice courts, etc. There are nine courts of record holding jury trials. There are also the Supreme Court of Appeals of Virginia and the Fourth Circuit Court of Appeals in our Federal court system located here. In addition to these, there are the numerous commissions and boards previously mentioned.

The doctor having factual knowledge of his patient's injuries is summoned to appear as a witness in a court action. He may be summoned by one of several methods. Everyone is familiar with the method of having a recognized officer, such as a sheriff or his deputy, serve a summons by delivering it in person to the prospective witness. In addition to this, the law of Virginia provides that anyone over the age of 21 years, who is not a party in interest to the law suit, may serve a summons on a witness, provided the adult serving the same makes an affidavit to the court as to his having served the summons. A summons served in this manner should not be ignored.

In addition to the above methods of service, a summons, may be tendered to a witness who can accept service by writing on the original (which is returned to the court) "Timely service of the above summons is hereby accepted" and signing his name. This, of course, obligates the witness to appear in court.

The summons may require the witness to appear before either a court, a grand jury, arbitrators, umpires in legal matters, a justice, a coroner, a duly appointed surveyor, a notary, or any commissioner appointed by a court.

The summons can be issued, upon the request of any party in interest, by a judge, the clerk of the court, a justice or a commissioner. The common-

A. SCOTT ANDERSON, *Partner in the law firm of Bowles, Anderson and Boyd. President of the Richmond Bar Association.*

Delivered before the Richmond Academy of Medicine, Richmond, on October 12, 1954.

wealth's attorney is empowered to issue a summons for a witness to appear before a grand jury. A court on its own initiative may cause a witness to be summoned before it.

A witness is compelled by law to answer the summons and appear as directed provided one day's attendance fee ($1.00) together with his mileage (at the rate of 7¢ per mile) to the court in excess of ten miles is paid or tendered him—in State courts and in U. S. courts $4.00 with his mileage at the rate of 10¢ per mile. Once a witness has been summoned in a lawful manner and he fails to appear as directed, a notice may be served on him to show just cause as to why he failed to appear. If no just cause is shown, the witness may be fined up to $20.00, which fine may be paid by court direction to the party requesting that the witness be summoned as his damages. In the event the witness should still refuse to appear in court or after appearing refuse to testify, he may be sent to jail until he agrees to appear and testify or be jailed up to twelve months.

The doctor may be summoned and compelled to testify as to the fact that he saw the patient and treated him and the amount of his bill, but the court will not require the doctor to give his opinion as a medical expert unless provision has been made to pay the doctor for his expert opinion. Usually the attorney calling the doctor as a witness makes an agreement with the doctor before trial as to the amount to be charged by the doctor for his expert opinion.

Obviously, the doctor who has accepted a patient for treatment is obligated to the patient to give the facts to the court when properly summoned, and if compensated for his expert opinion, to also give his expert testimony. In giving testimony the doctor should always bear in mind that neither the judge, the lawyers nor the jury are medically trained and should, therefore, use terms easily understood by all. When it is absolutely necessary to use medical or scientific terms, the same should be promptly explained. Demonstrations by showing the patient's injury or x-ray to the jury are always helpful.

Frequently the written report of the doctor furnished one of the attorneys in the case may be, by agreement of the lawyers, used instead of having the doctor appear in person. For this reason a doctor should always write his report carefully, fully, and understandably. All references in written reports or testimony to insurance companies, adjusters, etc., should be omitted unless the suit involves the insurance policy itself. The reason for this is that the jury is required to decide damage suits on the evidence without considering whether the defendant is insured or will have to bear the loss himself. To mention insurance before the jury may cause a mistrial.

It is proper evidence for the doctor to testify to the case history as related to the doctor by the patient or as secured from the hospital record. A doctor, however, should not invade the province of some speciality in which he is not an expert. The court may permit him to attempt to give such testimony, but the jury will be reminded that the doctor was not qualified in that specialty and consequently will not give consideration to that part of his testimony. This may serve to also weaken the testimony properly given by the doctor.

Another pitfall confronting the doctor is becoming over sympathetic with the patient. This leads to unconscious exaggeration in testimony which frequently is apparent to the jury or is attacked by the other side with disinterested medical testimony.

The doctor is always an important witness in any case in which he is called. In some cases, where the only question before the court is one concerning the amount of damages, the doctor, or doctors, may be the most important witnesses of all. Courts and lawyers recognize this, as well as the inconvenience it may cause a doctor to leave his practice to come to court. A little cooperation and planning ahead of trial by the lawyers and doctors will enable the doctors to appear in court at a specified hour, give their testimony and be promptly excused. Upon receiving a summons, it is well for the doctor to call the court or the lawyer and make such a time-saving arrangement. Generally the lawyer makes such an arrangement with the court and notifies the doctor.

There is one final instance of a doctor's obligation to the court. That is in connection with giving a certificate that some individual, a witness, a party to the suit or even a person called for jury duty, is not able to come to court. Frequently doctors are imposed upon by persons reluctant to go to court for one reason or another. Such person will see a doctor and give a plausible recitation of symptoms, secure a certificate which is forwarded to the court and then go merrily along about his pleasure or business and brag about not having to go to court. Inevitably such information gets back to the court who justifiably feels that the doctor has issued a certificate which was unworthy of acceptance by the court.

Any doctor would be well advised to satisfy himself conclusively that any person applying to him

for a certificate for exemption from court is in such a condition that it would be inadvisable for such person to attend court. To do otherwise is to run the risk of having to go to court himself to answer for issuing such a certificate.

A doctor possessed of factual knowledge of a patient's injury who receives a summons and goes to court and testifies from expert knowledge, on which he bases his opinion, given in a careful manner, so as to be understood by the court and jury, has indeed discharged his obligation to his patient and the court and rendered a public service in the administration of justice. By doing so, the medical profession justifies the high confidence in which it is held by the courts and the public.

901 Mutual Building, Richmond

Richest Source of Vitamin C.

A neglected backyard tree is about to give to the world its "richest known source of vitamin C" and to Puerto Rico a possible answer to its old one-crop economy problem. After almost 10 years of efforts by scientists to interest "the giants of the food industry" in the potentialities of the "fantastic" acerola tree, the first commercial crop finally has been produced and is ready for the market. The fruit is known as Puerto Rican cherry, West Indian cherry, acerola, or several other names. The tree grows semi-wild in the Caribbean islands where natives say a tree in the back yard will "keep colds out of the front door."

And a six-ounce glass contains as much as 8650 milligrams of vitamin C—more than 85 times as much as a six ounce glass of fresh orange juice. It would take over 50 pounds of fresh raw cabbage to give the same amount of vitamin C as a glass of acerola juice. The fruit is the size of an ordinary red cherry but is shaped more like a crab apple. Its taste is "tart and refreshing" and the tree bears four crops a year.

How the tree finally was developed commercially is told by Mrs. Anna May Wilson in the November Today's Health magazine, published by the American Medical Association. Her husband, Dr. James R. Wilson, director of the A.M.A.'s Council on Foods and Nutrition, was the man who interested orange juice millionaire Harvey Greenspan, Miami, in the acerola.

The fruit's amazing vitamin value was first discovered in 1945—almost accidentally—by Dr. Conrad F. Asenjo, while doing research on the vitamin content of various native Puerto Rican fruits. The tests showed him and his co-workers that "here was a fantastically rich, natural source of a health-promoting vitamin needed daily by everyone. It was available from a neglected, unappreciated, almost forgotten backyard tree. . . . Here—maybe—was a new and valuable cash crop for their little country, whose burden had ever been the worry of a one-crop economy, sugar cane."

Dr. Asenjo published his results but no one was interested until 1949 when Greenspan learned of it. He backed the planting of the first orchard, which produced its first harvest this spring after an expenditure of a quarter million dollars on the project. The experimental work and clinical testing are completed.

"The first use of C-rola juice will be in infant food. Desirable variety will be added to many a baby's diet by the addition of this natural protective food to such things as apple juice or pear juice. Next perhaps will be the enrichment of soft drinks not with chemicals but with a pure nutritious fruit juice in quantities so small that no flavor change will be noticed. The possibilities seem endless."

Pyridoxine Hydrochloride in the Treatment of Acute Alcoholism and Delirium Tremens

EDWIN J. PALMER, M.D., F.A.P.A.,
Roanoke, Virginia

STANDARD techniques in the treatment of the various pathological states of alcoholic intoxication have included dietetics and multiple vitamin therapy. The role of the components of the vitamin B Complex in the metabolism of alcohol by brain tissue as well as in the detoxication of alcohol in the body is recognized[1].

Gould[2] advises the intravenous administration of large doses of thiamine chloride (1000 mg.), nicotinamide (200 mg.), pyridoxine hydrochloride (200 mg.) and ascorbic acid (1500 mg.) in the treatment of the delirium, psychosis, and coma due to drugs or alcohol. Pullar-Strecker[3], referring to Gould's work, states that while it is not generally known, it is none the less true that the intravenous injection of high dosage multiple vitamins will relieve the symptoms of acute alcoholic intoxication and also the physical and mental symptoms of delirium tremens.

Wordsworth[4] cites six cases of acute alcoholic intoxication in which pyridoxine hydrochloride in doses of 50-100 mg., intravenously, appeared to be a specific antidote reversing states of drunkedness to complete sobriety in a matter of minutes.

I have confirmed Wordsworth's observations of pyridoxine detoxication of acute alcoholism .

I have, in addition, employed pyridoxine hydrochloride† in the treatment of delirium tremens in dosages to 1000 mcg. intravenously either in the concentration of 100 mg. per c.c., or added to 500 c.c. 5% glucose in distilled water. In this dosage pyridoxine completely relieves the physical and mental manifestations of delirium tremens in a matter of three to four hours. Sedation is not necessary. In fact, as Pullar-Strecker[3] states, "It is better to detoxicate than appease".

Case Reports

Case 1: Mrs. G. E. C., age 34, an alcoholic and paraldehyde addict of 8 years duration, was admitted to the hospital acutely intoxicated and given pyridoxine hydrochloride 50 mg., intravenously, every half hour for five doses. Sobriety returned a few minutes after the first dose. She remained symptom free, did not develop tremors and did not require sedation.

Case 2: Mrs. M. E., age 38, an alcoholic subject to periodic exacerbations, while intoxicated January 4, 1954, fell and injured her right hip. She was admitted to the hospital for roentgenological studies, which proved negative. Insomnia, tremors and nervousness increased and on the fourth hospital day when seen in psychiatric consultation, the clinical picture was that of well developed delirium tremens. Pyridoxine hydrochloride 500 mg., in 500 c.c. 5% glucose was given intravenously. The physical and mental symptoms of delirium tremens were relieved completely in two to three hours. No further treatment was necessary.

Case 3: Mr. A. M., age 40, a tavern keeper, alcoholic to the extent of a quart of whiskey daily for several years, abruptly (?) discontinued the habit, suffered a convulsive seizure during the first day of abstinence and developed an acute psychosis on the fourth day of abstinence. When hospitalized he was irrational, delirious, disoriented, noisy, disturbed, demanding and threatening and was placed in restraint. When seen in psychiatric consultation a few hours after admission he remained in restraint, had received 6 c.c. of paraldehyde intramuscularly and was unconscious. The pupils were pin point; the pulse 140 to 150 per minute, the blood pressure 130/90, and diaphoresis was profuse. He had received 600,000 units of penicillin, and 200 mg. of thiamine chloride intramuscularly and was in the process of receiving intravenously a liter of 5% glucose to which one ampule of Solu B had been added. 1000 mg. of pyridoxine hydrochloride was added to the intravenous and three hours later he was rational and removed from restraint. He received two multi-vitamin capsules, 800 mg. thiamine chloride and 500 mg. pyridoxine hydrochloride daily for the next three days and remained symptom free.

Comment

Intravenous pyridoxine hydrochloride should prove helpful in the differential diagnosis of coma due to alcohol or trauma or alcohol and other drugs. The

*Read before the Neuropsychiatric Society of Virginia, Charlottesville, Va., April 22, 1954.
†Furnished by Abbott Laboratories.

incidence of seizures in alcoholics, the relief of the acute symptoms of alcoholic intoxication by pyridoxine hydrochloride, as well as the reported role in infants of pyridoxine hydrochloride deficiencies in the production of epileptic seizures, makes clear the necessity of further studies of the relationship of pyridoxine hydrochloride, alcohol, and seizures in adults.

Conclusions

1. Pyridoxine hydrochloride intravenously is an effective agent in the treatment of acute alcoholism and delirium tremens.

2. Investigations into the nature and specificity of pyridoxine detoxication of alcohol are necessary.

Discussion

Dr. H. B. Haag, Richmond, Va.: This is a very interesting and stimulating paper which Dr. Palmer has presented, and I am glad to have the opportunity to discuss it.

As a vitamin pyridoxine (B6) is concerned with the metabolism of amino acids rather than that of carbohydrates, the category into which alcohol falls. Hence, it is difficult to account for the benefit derived from its administration in alcoholism on the basis of any direct effect on alcohol metabolism. However, there is the possibility that pyridoxine, by virtue of its conversion in the body to pyridoxamine, may inhibit aldehyde (from alcohol) activity. Secondly, on the basis that vitamins in large doses manifest a true pharmacological activity of their own, pyridoxine might exert an analeptic action on a central nervous system under the influence of alcohol. There has been no animal experimentation reported on this subject, so we intend to study the effect of pyridoxine in animals acutely poisoned with alcohol.

Bibliography

1. Dewan, J. G.: An Alcohol Detoxication Mechanism in the Central Nervous System, Am. J. Psychiat., 99: 565-68, 1943.
2. Gould, J.: Treatment of Delirium, Psychosis, and Coma Due to Drugs, The Lancet, 570-73, March 21, 1953.
3. Pullar-Strecker: British Medical Journal Correspondence, 995, April 25, 1953.
4. Wordsworth, V. P.: British Medical Journal Correspondence, 995, April 25, 1953.

1102 S. Jefferson Street.

Teen-Age Fatigue.

Teen-agers who are often tired and mope around the house may be ill—but are more likely to be quite normal. Dr. Edward A. Wilkes said teen-agers tire easily for one or more of a dozen reasons, and that most of the problems can be solved without expert help. He described the causes of fatigue in the November Today's Health, published by the American Medical Association.

The major reasons for normal fatigue are rapid growth, too little sunshine and outdoor exercise, social and school pressures with overstimulation and difficulty in sleeping, poor diet or overweight, and common teen-age emotional problems. "Fatigue is natural for many a healthy, fast-growing adolescent." "Moping and apparent indolence may be nature's way of slowing down body movement to withstand the strain of excessive growth. Wise parents will make sure their teen-agers get enough rest."

Teen-agers also need extra protein, and daily diet should include a quart of milk, fish or meat, eggs, a variety of green vegetables and fruit, including citrus fruits, and whole grain or enriched bread or cereal. Breakfast should be generous, even if the teen-ager's fatigue is due to overweight and he is on a diet. Reducing diets should be carefully supervised, since fatigue also may come from dieting fads common among teen-agers.

"Many teen-agers tire because they are unhappy or full of worries. These vague, ill-defined sources of adolescent anxiety" may cause the teen-ager to daydream he is a hero in compensation for lack of confidence and independence.

However, illness may be the cause of fatigue and continued tiredness calls for a detailed check-up.

"In summary, teen-age fatigue may be a normal accompaniment of rapid physical growth, may stem from illness or psychological cause, or may be due to one or more contributing factors." "Careful analysis by the physician, with your help, will usually solve the mystery and provide a clue to the proper remedy."

Personalities . . . .



Big Business Doin's!
Just Before the House of Delegates!



Past and Present!
Drs. Archer and Williams



The Big Bosses!
Drs. McLendon and Archer



Well Done!
Dr. Hoover Receives Award from General Maas

The above pictures were among those taken at the First Interstate Scientific Assembly in Washington, D. C.

The Medical Society of Virginia . . . .

Council

The meeting of the Council of The Medical Society of Virginia was called to order by Dr. Vincent W. Archer, President, at 1:00 P.M. on Sunday, October 31, 1954, at the Hotel Shoreham, Washington. The roll was called and a quorum announced. Attending were Dr. Carrington Williams, Dr. James L. Hamner, Dr. David S. Garner, Dr. Mack I. Shanholtz, Dr. Lewis H. Bosher, Jr., Dr. A. A. Creecy, Dr. Walter P. Adams, Dr. Guy W. Horsley, Dr. Wilkins J. Ozlin, Dr. Louis P. Bailey, Dr. Frank A. Farmer, Dr. Harold W. Miller, Dr. Claude A. Nunnally, Dr. James P. King, Dr. James W. Love, Dr. John T. T. Hundley, Dr. K. D. Graves, Mrs. K. W. Howard, and Mrs. Maynard R. Emlaw.

Dr. Harry J. Warthen, Jr., Chairman, presented the report of the Finance Committee, and the proposed budget for fiscal 1954-55 was discussed in detail. (The complete budget is included in the minutes of the first session of the House of Delegates.)

Considered next was the matter of a suitable memorial to be erected at the grave of Miss Agnes V. Edwards. After hearing a report on the cost of granite markers, bronze plaques, etc., it was moved and seconded that $150 be appropriated and that the Executive Secretary be instructed to select an appropriate memorial. The motion passed unanimously.

An invitation to the Society to join the Aces and Deuces Association was read, and it was explained that membership in this Association was open only to those state societies having not more than two delegates to the A.M.A. The purpose is "to allow members of small delegations to combine their financial efforts" and thus return the many kindnesses which have been shown them by the larger delegations. It was moved and passed that the Society take out membership in the Association.

The advisability of sending representatives to the National Conference on Physicians and Schools was discussed, and it was thought best to refer the matter to the Committee on Child Health for study and recommendation.

Council then heard the report of the special Insurance Committee which had studied the advantages to be gained from a group sickness and accident insurance plan on the state level. The Committee had also considered proposals of five companies prominent in the sickness and accident field. It was the Committee's opinion that such a plan might enable those members presently uninsurable to acquire coverage, if 51% participation were secured.

The Committee further reported that the proposals had been narrowed to two and that making a choice posed quite a problem. However, since the Loyalty Group already had over 700 members enrolled in the various component society plans, it would appear that it would have the best chance to reach a 51% participation figure, and thus make their coverage available to all. It was then moved and passed that a recommendation be made to the House of Delegates that the Society sponsor the Loyalty Group plan.

Dr. James Love reported on his efforts to locate a copy of the original seal of the Society and had a picture of the seal available. The seal, believed by Dr. Love to be the original, appeared on the cover of the May 1874 issue of the Virginia Medical Monthly and was located in the Army Medical Library, Washington. Dr. Love did not believe the seal to be appropriate for decorative purposes. It was moved that a committee be appointed to investigate the possibility and make recommendations concerning a seal for the Society. The motion carried.

Notice was taken of the 1955 Annual Meeting to be held in Richmond, and it was mentioned that the Southwestern Virginia Medical Society would like to be host for the 1956 meeting. The matter of a cruise convention in 1957 was also discussed, and it was proposed that a committee be appointed to study the advisability of such an undertaking.

Considered next was the matter of professional license taxes, and whether or not the Society should take a stand in this regard. Information was presented showing that the tax formulas vary considerably in the various communities. However, it was the consensus that the matter was primarily one of local concern and that it would be best not to take a stand on the state level.

A special "courtesy" membership for interns and residents was considered, and it was brought out that usually there exists a considerable gap between medical school and membership in a medical society. Because of this, interns and residents lose contact with activities on the local, state and national levels. The A.M.A. has a special membership for this group contingent upon membership in a state society. It was then moved that a proposed amendment to the By-Laws making such membership possible be presented to the House of Delegates. The motion carried.

It was reported that inquiries had been received concerning the matter of seeking to have the fee for physicians sitting on Sanity Commissions increased from $5 to $10. A motion was made to refer the matter to the Legislative Committee of the Society for such action as it believed proper. The motion was adopted.

The question was raised as to whether or not resolutions (involving no constitutional amendment) to be introduced in the House of Delegates should be published prior to the annual meeting. It was pointed out that in many instances this would prove quite difficult. A motion was made that resolutions, whenever possible, be mimeographed and sent to members of the House of Delegates before the meeting. The motion carried.

An article in a recent issue of Collier's concerning blood banks was discussed, and it was brought out that one hospital in Virginia was reported to have realized a profit last year of $300,000 from its blood bank. It was believed that an error had been made and that the author should be contacted and requested to either substantiate his claim or print a correction. It was moved that Dr. Archer and Dr. E. C. Drash check with the writer of the article and make any follow up necessary. The motion was passed.

A resolution was considered which would have the Society recommend that each component society seriously consider publicly guaranteeing the services of a physician to everyone—regardless of ability to pay. Mentioned was the fact that the A.M.A. had advocated such a resolution and requested all state medical societies to cooperate in such a Public Relations project. After considerable discussion, it was thought best to postpone action until such time as more study and consideration could be given the wording of such a resolution and its implications.

There being no further business, the meeting was adjourned.

House of Delegates

First Session

The House of Delegates of The Medical Society of Virginia met in the West Ballroom of the Hotel Shoreham on October 31, 1954, and was called to order at 8:00 P.M. by Dr. Vincent W. Archer, President.

Dr. Archer called attention to the fact that chairmen of all committees had been invited to attend the dinner meeting of the House, and went on to stress the vital role played by committees in the Society's operations.

The President then pointed out the historical significance attached to the First Interstate Scientific Assembly—the first joint meeting of The Medical Society of Virginia and the Medical Society of the District of Columbia. It was called a fitting climax to a year which had welded even tighter the strong bond of friendship existing between Virginia physicians and their neighbors to the North.

Dr. Archer then introduced Dr. John T. T. Hundley, Speaker of the House, who called for a report from Dr. Ira L. Hancock, Chairman of the Credentials Committee. Dr. Hancock reported a quorum present.

Minutes of the 1954 meeting of the House of Delegates were then approved as published in the December, 1953, issue of the Virginia Medical Monthly.

The following names of those members of The Medical Society of Virginia whose deaths had been reported since the 1954 meeting were then read:

Dr. James Edward Amiss, Altavista
Dr. Charles Rhodes Anderson, Winchester
Dr. Charles Howard Baker, Chilhowie
Dr. Robley Dunglison Bates, Newtown
Dr. John Beattie, Virginia Beach
Dr. Oliver F. Blankingship, Richmond
Dr. George Woodford Brown, Williamsburg
Dr. George Hopkins Carr, Portsmouth
Dr. Milton Buell Coffman, Richmond
Dr. Ashley Phillip Cutchin, Franklin
Dr. Edward Arthur Delarue, Jr., Richmond
Dr. Lemuel Leslie Eley, Chuckatuck
Dr. Everett Idris Evans, Richmond
Dr. Allen Weir Freeman, Baltimore, Md.
Dr. Alexander Yelverton Peyton Garnett, Washington, D. C.
Dr. Thomas Archer Gibson, Winchester
Dr. J. Gates Goode, Cheriton
Dr. William Tate Graham, Richmond
Dr. Lomax Gwathmey, Norfolk
Dr. Lyle Jamesson Hansbrough, Front Royal
Dr. Francis Musgrave Howell, Hopewell
Dr. Paul Williamson Howle, Richmond
Dr. Christian Kevin Campbell Hoyle, Swannanoa, N. C.
Dr. James Felmer Hubbard, Waynesboro
Dr. J. Walker Jackson, Machipongo
Dr. Thomas Franklin Jarratt, Jarratt
Dr. Edwin Partridge Lehman, Charlottesville
Dr. Louis Selnik Leo, Norfolk
Dr. George Hunter Long, Luray
Dr. Henry Stuart MacLean, Richmond
Dr. Louis Allen McAlpine, Portsmouth
Dr. Albert S. McCown, Richmond
Dr. Edgar Calvin LeRoy Miller, Richmond
Dr. Heber Jones Morton, Stuarts Draft
Dr. George Harrison Musgrave, Leesburg
Dr. William Oscar Neal, Chatham Hill
Dr. Robert H. Newman, Vinton
Dr. David E. Peirce, Bluefield, W. Va.
Dr. William Leven Powell, Roanoke
Dr. Robert Sheffey Preston, Richmond
Dr. Nathaniel Fulford Rodman, Norfolk
Dr. Marvin Pierce Rucker, Richmond
Dr. Delbert Thornton Saffer, Middleburg
Dr. Henry Launcelot Segar, Warsaw
Dr. Eugene William Senter, Salem
Dr. Homer Amos Spitler, Middleburg
Dr. Fred Eugene Steere, Claremont
Dr. Jesse Columbus Sutherland, Sparta, Ill.
Dr. John Lloyd Tabb, Jr., Richmond
Dr. Clifton Ross Titus, Bedford
Dr. Alexander Emmett Turman, Richmond
Dr. George Colbert Tyler, Newport News
Dr. Thomas Henry Valentine, Lawrenceville
Dr. Isaac Roy Wagner, Gordonsville
Dr. Robert Alexander Warren, Hot Springs
Dr. John Powell Williams, Richmond
Dr. Julius Drehrer Willis, Roanoke
Dr. Charles Rollin Woolwine, Jr., Sealston
Dr. George A. Wright, Marion
Dr. Albert T. Young, Alexandria

Dr. Hundley introduced Dr. Preston L. McLendon, President of the Medical Society of the District of Columbia, and Dr. Zack D. Owens, President of the Medical Society of the State of North Carolina.

Mrs. K. W. Howard, President, and Mrs. Maynard R. Emlaw, President-Elect of the Woman's Auxiliary to The Medical Society of Virginia, were then introduced. Mrs. Howard reported a gain during the year, not only of members, but also in the number of component auxiliaries.

Recognized as delegates to special meetings were Dr. Waverly R. Payne, delegate to the Virginia Pharmaceutical Association, and Dr. James L. Hamner, delegate to the Virginia Academy of General Practice. Unable to attend the meeting were Dr. W. Linwood Ball, delegate to the Virginia State Dental Association, and Dr. David C. Wilson, delegate to the Chicago Conference on Mental Health sponsored by the A.M.A.

On hand to report on the National Student A.M.A. meeting in Chicago were Nelson Fox and Robert Osborne, Medical College of Virginia, and Robert Cassidy and Julius Conn, University of Virginia. Mr. Fox and Mr. Cassidy, speaking for their respective S.A.M.A. chapters,

expressed appreciation of the Society's support and its contributions which help make it possible for the two chapters to send delegates to the national meeting.

The Speaker then introduced the following visiting delegates to the Annual Meeting: Mr. John House Jones and Mr. Ralph J. Walker, of the Virginia Pharmaceutical Association, and Dr. S. Nelson Gray, of the Virginia State Dental Association. Regrets were expressed that Miss Hazel Knibb, Graduate Nurses Association of Virginia, was unable to attend because of illness.

Dr. Walter B. Martin, President of the American Medical Association, was then introduced and spoke briefly on the socio-economic problems facing the profession. Dr. Martin emphasized the necessity of physicians taking their obligations seriously, and urged everyone to support the American Medical Education Foundation.

The Speaker next recognized Dr. Harry J. Warthen, Jr., Chairman of the Finance Committee, who presented the proposed budget for fiscal 1954-55 as recommended by Council. The total budget of $68,875 was adopted and is listed below.

BUDGET 1954-55

Executive Office	
Salaries	$23,000.00
Postage	650.00
Telephone	1,500.00
Stationery & Supplies	750.00
Office Equipment	1,300.00
Building Maintenance	2,000.00
Building Repair & Improvement	500.00
Convention Contingency	1,000.00
Council Expenses	300.00
Exec. Asst. to A.M.A.	200.00
Delegates to A.M.A.	2,000.00
Extra A.M.A. Convention Expenses	50.00
President's Expense	1,000.00
Travel Expense	2,000.00
Virginia Medical Monthly	18,500.00
Scientific Exhibits	2,500.00
Post Graduate Medical Education	1,000.00
Legal Expense	1,000.00
Walter Reed Commission	400.00
Miscellaneous Committees	500.00
National Emergency Medical Service	150.00
Woman's Auxiliary	100.00
Affiliated Agencies Dues	100.00
Special Appropriations	
Va. Council Health & Med. Care	2,000.00
National Society for Medical Research	150.00
Memorial for Miss Edwards	150.00
A.M.E.F.	2,000.00
Social Security	375.00
Student A.M.A.	200.00
Miscellaneous	500.00
Public Relations	
PR Booklet	350.00
Conference	750.00
Radio & Press	500.00
Literature & Bulletins	1,250.00
Exhibits	150.00
	$68,875.00

It was then moved and carried that the following reports, which were published in the September, 1954 issue of the Virginia Medical Monthly, be adopted: Executive Secretary-Treasurer, Woman's Auxiliary, Publication Committee, Scientific Exhibits Committee, Program Committee, Postgraduate Medical Education Committee, Grievance Committee, and Ethics Committee. A supplemental report of the Ethics Committee was made by Dr. Malcolm Harris and can be found in the supplemental report section of this issue. This report was also adopted.

Considered next was the report of the Judicial Committee, which was adopted. However, it was necessary to first explain that a vote to adopt the report was not a vote to adopt the proposed amendments to the Constitution and By-Laws contained therein. The report merely cleared the way for consideration of the proposed amendments.

The proposed amendment to Article IV of the Constitution was considered, and Dr. W. C. Fitzgerald offered the following resolution:

The Danville-Pittsylvania Academy of Medicine in the fall of 1952, by a large majority, voted affirmatively on the motion that the Negro physicians of the community be invited to join the Academy. This was done, not to implement a complete syncrasy of the two races, but to strengthen professional ties, give the Negro physician a chance to participate in scientific discussions, and make possible his membership in the American Medical Association.

However, this action was rescinded because it was in conflict with Article III of the Constitution of The Medical Society of Virginia and probably in conflict with Section 10, Article III, of the By-Laws.

Our Academy still thinks as it did in 1952; so much so that at the meeting of May 14, this year, it reaffirmed its previous position and without a dissenting voice voted to present a resolution to the state society at its next meeting.

WHEREAS, it is the desire of the Danville-Pittsylvania Academy of Medicine to admit Negro physicians to the local county society for the reasons stated above; and

WHEREAS, other county societies may desire similar action; and

WHEREAS, admission of Negro physicians to membership in the component societies of The Medical Society of Virginia is not possible under the present Constitution of the state society;

THEREFORE BE IT RESOLVED: That the Constitution of The Medical Society of Virginia be amended by deletion of the word "white" from Article IV so that it reads as follows:

ARTICLE IV. Physicians in Virginia, not practicing sectarian medicine, members of a component society, are eligible to active membership. Provision may be made for associate membership.

A substitute motion was introduced to table the original motion until the laws of Virginia were changed concerning segregation. After considerable discussion, the substitute motion was voted on and lost.

The original motion was then voted upon and was adopted by 76-36, a two-thirds majority. (Constitutional amendments require a two-thirds vote of the House of Delegates, and must be ratified by a general meeting of the Society. It is also necessary that they be published in the Virginia Medical Monthly before the annual meeting.)

Proposed amendments to the Constitution providing for the election of a Speaker of the House of Delegates and prescribing certain of his duties were next considered. The amendments were approved by more than a two-

thirds majority.

A resolution, not previously published, was then presented which would amend the By-Laws in order to provide a special form of membership for interns and residents of approved hospitals. It was brought out that such a membership would enable physicians in this group to maintain contact with society activities during that period immediately following medical school and the establishing of a practice. The resolution was referred to the Reference Committee.

It was moved and carried that the following reports be adopted: Medical Service Committee, Membership Committee, Public Relations Committee, Venereal Disease Control Committee, Tuberculosis Committee, and the Cancer Committee. A supplemental report of the Cancer Committee was adopted and can be found in the supplemental report section of this issue.

The report of the Mental Hygiene Committee was considered, and it was moved that the portion of the report recommending free rent for one year to the Mental Health Association of Virginia be rejected. The motion carried. The remainder of the report was adopted.

Reports of the following were also adopted: Rehabilitation Committee, Cerebral Palsy Committee, Conservation of Hearing Committee, Liaison Committee to the United Mine Workers Welfare and Retirement Fund, National Emergency Medical Service Committee, American Medical Education Foundation Committee, Maternal Health Committee, Committee to Confer with the Old Dominion Medical Society, Advisory Heart Committee, Poliomyelitis Committee, Federal Medical Services Committee, Advisory Committee to the Woman's Auxiliary and the Walter Reed Commission. (Reports of the Advisory Committee to the Woman's Auxiliary and the Walter Reed Commission, although available to members of the House during the meeting, were not published previously in the Virginia Medical Monthly. They can be found in the supplemental report section of this issue.)

Dr. Hundley then called for new business, and resolutions introduced by the following delegates were referred to the Reference Committee.*

Dr. J. Morrison Hutcheson—resolution by which Society would grant permission for the reproduction of writings of Dr. M. Pierce Rucker.

Dr. Mallory Andrews—resolution which would have the Medical Service Committee study the matter of hospital-physician relationship.

Dr. Benjamin W. Rawles, Jr.—resolution to change name of Grievance Committee to Mediation Committee.

The following recommendation of Council with reference to a group sickness and accident insurance plan on the state level was presented:

On the basis of the recommendations of a committee appointed for that purpose, Council recommends to the House of Delegates of The Medical Society of Virginia that a Group Sickness and Accident Insurance Plan proposed by the Loyalty Group be adopted.

Dr. Guy W. Horsley, Chairman of the special Insurance Committee, explained why the Committee had been appointed and stated that the major advantage of such a plan would be the possibility of making this type coverage available to those presently uninsurable. This would depend upon whether or not Loyalty Groups could secure a 51% participation figure. It was pointed out that since they now have over 700 members insured in component societies, they should not have too much difficulty reaching their goal.

It was then moved that the Society sponsor the Loyalty Group Plan. The motion carried.

Dr. Hundley requested that members of the Nominating Committee meet immediately after adjournment in order to set a time and place for the committee meeting. Members of the committee were Dr. Ira L. Hancock, First District; Dr. W. H. Whitmore, Second District; Dr. Benjamin W. Rawles, Jr., Third District; Dr. James L. Hamner, Fourth District; Dr. W. C. Fitzgerald, Fifth District; Dr. Allen Barker, Sixth District; Dr. Guy R. Fisher, Seventh District; Dr. E. C. Drash, Eighth District; Dr. Rufus Brittain, Ninth District; and Dr. Ben C. Jones, Tenth District.

There being no further business, the meeting was declared adjourned until Tuesday, November 2, at 4:00 P.M.

Second Session

The second session of the House of Delegates of The Medical Society of Virginia was called to order by Dr. John T. T. Hundley, Speaker of the House, at 4:00 P.M., Tuesday, November 2, in the Blue Room of the Hotel Shoreham.

A report was requested from the Credentials Committee, and Dr. Hancock announced that a quorum was present.

Considered first was the report of the Reference Committee. The Committee recommended that the following resolution be referred to the Judicial Committee for consideration and presentation next year, since a Constitutional amendment would be necessary. The recommendation was approved.

It is hereby proposed that the name of the Grievance Committee be changed to the Mediation Committee in line with recommendations made by the American Medical Association.

One change was recommended by the Reference Committee in the resolution introduced by Dr. Andrews. It was recommended that "Council on Medical Service" be substituted for "Judicial Council". The recommendation was approved and the resolution adopted as follows:

It is moved that The Medical Society of Virginia, through its Medical Service Committee and Sub-committee on Hospital-Physician Relationship

(A) Take active measures to investigate, resolve and clarify the issues of hospital-physician relationships;
(B) Seek for an amicable understanding on this subject by joint action with the Virginia Hospital Association;
(C) Refer the matter on to the Council on Medical Service of the American Medical Association, if necessary; and
(D) Report back at the earliest possible date to this Society.

The following resolution was then adopted on the recommendation of the Reference Committee:

Whereas, the late Dr. M. Pierce Rucker was an honored member of this Society for half a century, serving as its President, as Editor of the Monthly and in various other capacities, and

*Text of resolutions included in minutes of Second Session, House of Delegates.

WHEREAS, Dr. Rucker's contributions to medical literature include a wealth of material of unique scientific and historical interest, and,

WHEREAS, a group of Dr. Rucker's friends and colleagues have undertaken to collect and publish in enduring and accessible form a large part of his writings, and

WHEREAS, any surplus that may accrue for subscriptions to this publication or the sale thereof, will be used to establish a scholarship fund to be used for the education of Public Health personnel affiliated with an approved agency,

THEREFORE, BE IT RESOLVED, that The Medical Society of Virginia grants full permission for the reproduction of any material by Dr. Rucker that has appeared in the Monthly, and be it

FURTHER RESOLVED, that the Society, through the Virginia Medical Monthly, and its Headquarter's Staff, promote this undertaking and assist in securing and receiving subscriptions.

Proposed amendments to the By-Laws, with reference to a Speaker of the House and his duties, were then approved. (These amendments can be found in the Judicial Committee report published in the October, 1954 issue of the Virginia Medical Monthly.

The Reference Committee recommended one change in the resolution which would amend the By-Laws in order to provide a special type membership for interns and residents. It was suggested that the word "special" be deleted and the word "courtesy" inserted in its place. The recommendation was approved and the resolution adopted as follows:

Amend Article I of the By-Laws as follows:

Section 1—Amend first sentence to read: "Members of the Society are classified as active, life, associate, and courtesy."

At end of Section 1 add following paragraph: "Physicians serving internships, residencies and fellowships in approved hospitals may be elected to courtesy membership."

Amend Article II of the By-Laws as follows:

Section 1—Add following sentence: "No dues are required of courtesy members."

Dr. Guy R. Fisher, Chairman of the Committee on Nominations, was recognized and submitted the following nominations:

President-Elect: Dr. James P. King, Radford
1st Vice-President: Dr. James W. Love, Alexandria
2nd Vice-President: Dr. Waverly R. Payne, Newport News
3rd Vice-President: Dr. Benjamin W. Rawles, Jr., Richmond
Speaker of the House: Dr. John T. T. Hundley, Lynchburg
Executive Secretary-Treasurer: Robert I. Howard
Councilors:
2nd District: Dr. Walter P. Adams, Norfolk
4th District: Dr. Wilkins J. Ozlin, South Hill
6th District: Dr. Frank A. Farmer, Roanoke
8th District: Dr. McLemore Birdsong, Charlottesville
9th District: Dr. James P. Williams, Richlands
10th District: Dr. Harry C. Bates, Jr., Arlington

Voted on separately, all nominations were approved and elected unanimously.

Election of a delegate to the American Medical Association was next considered. This was necessary since the term of Dr. Carrington Williams expires December 31. Elected as delegate was Dr. Vincent W. Archer. Dr. Allen Barker was chosen as alternate.

The election of Dr. Archer as delegate made it necessary to elect an alternate to Dr. J. Morrison Hutcheson, since Dr. Archer had held that office. Dr. W. Linwood Ball was elected.

Dr. John O. Boyd, Jr., representing the Virginia Academy of General Practice, placed in nomination the names of Dr. Benjamin B. Dutton, Winchester, and Dr. Henry A. Latane, Alexandria, for General Practitioner of the Year in Virginia. When the balloting was concluded, the Speaker announced that Dr. Latane had been elected to that honor.

The Southwestern Virginia Medical Society, through its President, Dr. C. C. Hatfield, extended to The Medical Society of Virginia an invitation to hold the 1956 Annual Meeting in Roanoke. The invitation was accepted and the 1956 meeting definitely scheduled for Roanoke.

Dr. W. C. Salley, Norfolk, moved that the office of Vice-Speaker of the House of Delegates be created and that Council be responsible for introducing an amendment to the Constitution and By-Laws in 1955 which would define the duties of a Vice-Speaker and provide for his election. The motion carried.

The following resolution was then presented and adopted unanimously:

RESOLVED, that the House of Delegates of The Medical Society of Virginia take recognition and express appreciation of the tremendous job which has been accomplished by our hosts, the Alexandria, Arlington County and Fairfax County Medical Societies, and the Joint Committees on Arrangements in connection with this First Interstate Scientific Assembly, and

BE IT FURTHER RESOLVED, that this body express appreciation to the officers and staff of the Medical Society of the District of Columbia for the hospitality extended our members, and the Hotels Shoreham and Sheraton-Park for their complete cooperation in helping to make this meeting an outstanding success.

Because the report of the Legislative Committee had been published in the May, 1954 issue of the Virginia Medical Monthly, it was overlooked when committee reports were considered during the first session of the House. It was moved and carried that the report be adopted.

There being no further business, the House of Delegates adjourned.

ROBERT I. HOWARD, *Executive Secretary*

Approved:
VINCENT W. ARCHER, M.D., *President*

Supplemental Reports

MEDICAL ETHICS

The Medical Ethics Committee has had an increasing number of requests for advice relating to advertising by members in Newspapers, Telephone Directories, on office plaques, and publication of the names of staff members in Medical Journals. The wide variation in local attitudes to these questions prompted the Ethics Committee, with the help of the Secretary's Office, to send a questionnaire to each of the 46 component societies. These were sent to the president of each society, and 25 have to date replied. The data compiled from these replies is worthy of reporting to the House of Delegates for consideration.

It seems proper to call to the attention of the House of Delegates, the fact that on August 31, 1954, Mr. Howard

reported 2,451 members of this society. The Board of Examiners reported on July 1, 1954, 2,980 resident licensed physicians in Virginia. There are in Virginia now engaged in the practice of medicine 429 physicians who do not come under the jurisdiction of this society. This number included about 125 Negro physicians, and there may be a few others who hold membership in local societies.

Again we would like to point out that we are reporting facts from 25 societies out of a possible 46 in the state.

Questionnaire and Replies

1. Do you have an active committee on Medical Ethics in your local society?

   Seventeen reported they had no Committee.
   Eight reported they had a Committee.

2. Do you periodically discuss Medical Ethics at your meetings?

   Fifteen reported discussion of Ethics.
   Ten reported no discussion of Ethics.

3. What is the attitude of your society with reference to advertising by physicians in Newspapers:

   Twenty-four were opposed, and one expressed no opinion.

   by physicians in Telephone Directories:

   Fourteen were opposed, and eight approved.

   by physicians use of plaques indicating specialty:

   Seventeen were opposed, and six thought it proper.

4. What is the attitude of your society regarding the use of cards announcing the opening of office, or specialty practice, should cards be sent to the profession?

   Twenty-four thought it proper.
   to the general public:

   Twenty-two were opposed, and three had no opinion.

5. What is the reaction of physicians in your community to the publication in Medical Journals, of staff members names?

   Thirteen approved the publication of names.
   Six were opposed to publication of names.
   Four expressed no opinion.

6. To what extent will your society go along with a state wide program of "Return to Ethical Practice"?

   One replied that he did not like the implication.
   One expressed no opinion.
   Twenty-three were willing to cooperate fully.

It is conclusive that the component societies are organized poorly as related to matters of Medical Ethics at the local level. There is strong feeling against physicians advertising in newspapers. The use of specialty designation in telephone directories has been admitted to aid the public, but is not considered by all in good taste. The publication of staff members in Medical Journals is acceptable to a majority.

Since twenty-three of the presidents endorsed the idea of a program of re-emphasis on Medical Ethics, the Committee feels that it is safe to say there is genuine enthusiasm among the socities for an opportunity to inform the membership about Medical Ethics.

Recommendations

1. That The Medical Society of Virginia take steps to encourage the setting up of committees in each component society to deal with Medical Ethics at the local level.
2. That The Medical Society of Virginia ask the faculties of the two medical schools to place more emphasis on teaching Medical Ethics not only by lectures, but by precept and example.
3. That The Medical Society of Virginia during the coming year project a more serious plan to familiarize the members with the Principle of Medical Ethics.

Respectfully submitted by the Ethics Committee.

H. H. Hurt, M.D.
H. S. Daniels, M.D.
M. H. Harris, M.D., *Chairman*

CANCER

At a meeting of the Cancer Committee, held on October 8, 1954, the Annual Reports from the Tumor Clinics certificated by the Committee were reviewed and re-certification was extended for the coming year to the following clinics:

McCluer Tumor Clinic, Alexandria
Kings Mountain Memorial Hospital Tumor Clinic, Bristol
McIntire Tumor Clinic, University of Virginia
Chesapeake and Ohio Hospital Tumor Clinic, Clifton Forge
Memorial Hospital Tumor Clinic, Danville
Dixie Hospital Tumor Clinic, Hampton
Lynchburg Tumor Clinic, Lynchburg
Eastern Shore of Virginia Tumor Clinic, Nassawadox
DePaul Hospital Tumor Clinic, Norfolk
Norfolk General Hospital Tumor Clinic
Diagnostic Tumor Clinic, Norton
Portsmouth Diagnostic Tumor Clinic
Tri-County Tumor Clinic, Richlands
Medical College of Virginia Tumor Clinic
Jefferson Hospital Tumor Clinic, Roanoke
Memorial and Crippled Children's Hospital Tumor Clinic, Roanoke
Lewis-Gale Hospital Tumor Clinic, Roanoke
Louise Obici Memorial Hospital Tumor Clinic, Suffolk

The Committee extended certification to a newly organized group, the Newport News-Warwick Diagnostic Tumor Clinic, with Dr. R. A. Davis as Director.

The Cancer Committee agreed to ask the Tumor Clinic Directors to certify to the Virginia Division of the American Cancer Society as indigent patients deserving financial support, only those patients so classified by Public Health Offices, Welfare Offices, Social Service Departments in hospitals supporting certificated Tumor Clinics, and Tumor Clinic Directors.

The Cancer Committee advised the Virginia Division not to offer payment for use of radon or radium.

The Cancer Committee advised the Virginia Division of the American Cancer Society that information needed by the Division concerning professional services rendered in the Tumor Clinics should be obtained from the Cancer Committee rather than directly from the Tumor Clinics, in order that no inadvertent violation of professional confidence might occur.

The Cancer Committee is asking the Legislative Committee to hear Dr. Southward, Director of the Bureau of Cancer Control of the State Health Department, on the subject of making cancer a reportable disease. The Cacer Committee feels that this question deserves further

investigation and would like the advice of the Legislative Committee regarding it.

The Committee approved the distribution by the Virginia Division of a leaflet encouraging periodic cancer detection examinations. The leaflet will be sent to the members of The Medical Society of Virginia by the Cancer Committee before it is distributed to the lay public by the Virginia Division.

GEORGE COOPER, JR., M.D., *Chairman*

ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

The Committee has been available at all times for assistance to the Woman's Auxiliary.

On several occasions during the past year Mrs. K. W. Howard, President of the Woman's Auxiliary, has asked this Committee for advice on several matters of interest to the Woman's Auxiliary which has been given.

MALLORY S. ANDREWS, M.D., *Chairman*

WALTER REED COMMISSION

Your Committee believes that The Medical Society of Virginia should make every effort to have the Walter Reed birthplace taken over by the National Park Service or some other appropriate federal or stage agency. This would appear to be the answer to preserving "Belroi" as a fitting memorial.

Repairs to the roof and flooring were necessary during the year, and it was fortunate that some shingles were found which matched the old. The most immediate problem is posed by the plastering, which is threatening to fall. The house will also need a new coat of paint next spring.

Although the grounds are in pretty good condition, the grass suffered greatly from the drought and another planting is necessary. The Committee has been fortunate in finding a man living near the property who will keep the grounds presentable. However, if the work is to be done properly, a mower should be acquired.

H. A. TABB, M.D., *Chairman*

Committees

STANDING

PUBLICATION: Lewis H. Bosher, Jr., M.D., *Chairman,* Richmond (3); Wyndham B. Blanton, M.D., Richmond (1); Lloyd B. Burk, Jr., M.D., Arlington (2).

POSTGRADUATE MEDICAL EDUCATION: Vincent W. Archer, M.D., *Chairman,* Charlottesville; James L. Hamner, M.D., Mannboro; Mack I. Shanholtz, M.D., Richmond; Kinloch Nelson, M.D., Richmond; William Parson, M.D., Charlottesville; C. V. Cimino, M.D., Fredericksburg.

ETHICS: Malcolm H. Harris, M.D., *Chairman,* West Point (3); H. H. Hurt, M.D., Lynchburg (2); Guy R. Fisher, M.D., Staunton (1).

GRIEVANCE: W. C. Caudill, M.D., *Chairman,* Pearisburg (1); C. L. Harrell, M.D., Norfolk (2); John T. T. Hundley, M.D., Lynchburg (3); James L. Hamner, M.D., Mannboro (4); Vincent W. Archer, M.D., Charlottesville (5).

JUDICIAL: J. Morrison Hutchinson, M.D., *Chairman,* Richmond (2); Richard P. Bell, Jr., M.D., Staunton (3); J. D. Zylman, M.D., Falls Church (1).

LEGISLATIVE: J. D. Hagood, M.D., *Chairman,* Clover (2); W. C. Caudill, M.D., Pearisburg (2); Dean B. Cole, M.D., Richmond (2); Benjamin W. Rawles, Jr., M.D., Richmond (3); J. Edwin Wood, Jr., M.D., Charlottesville (1); Frank A. Farmer, M.D., Roanoke (1); John C. Watson, M.D., Alexandria (3); Walter P. Adams, M.D., Norfolk (3); W. C. Elliott, M.D., Lebanon (1).

MEDICAL SERVICE: H. B. Mulholland, M.D., *Chairman,* Charlottesville (1); Russell Buxton, M.D., Newport News, (1); Frank A. Farmer, M.D., Roanoke (1); James P. Williams, M.D., Richlands (1); T. B. McCord, M.D., Fairfax (2); Charles H. Lupton, M.D., Norfolk (2); John G. Graziani, M.D., Farmville (2); Charles L. Savage, M.D., Waynesboro (2); Snowden C. Hall, Jr., M.D., Danville (2).

MEMBERSHIP: James A. Thweatt, M.D., *Chairman,* Petersburg (1); A. P. Jones, M.D., Roanoke (3); Henry J. Langston, M.D., Danville (2).

SCIENTIFIC EXHIBITS AND CLINICS: Allen Barker, M.D., *Chairman,* Roanoke (1); Alvin C. Wyman, M.D., Alexandria (2); Frank M. Blanton, M.D., Richmond (3).

PUBLIC RELATIONS: Harry C. Bates, Jr., M.D., *Chairman,* Arlington (1); John Wyatt Davis, Jr., M.D., *Vice-Chairman,* Lynchburg (2); James P. King, M.D., Radford (3); W. T. Thompson, M.D., Richmond (3); Mason C. Andrews, M.D., Norfolk (2); Fred D. Maphis, M.D., Strasburg (1).

PROGRAM: George B. Craddock, M.D., *Chairman,* Lynchburg (3); Ira L. Hancock, M.D., Creeds (1); A. A. Creecy, M.D., Newport News (2); Elam C. Toone, M.D., Richmond (Associate).

FINANCE: Harry J. Warthen, Jr., M.D., *Chairman,* Richmond (3); Walter B. Porter, M.D., Hillsville (2); Fletcher J. Wright, Jr., M.D., Petersburg (3).

SPECIAL

CHILD HEALTH: Edwin L. Kendig, M.D., *Chairman,* Richmond; Robert H. Cox, Jr., M.D., Lynchburg; McLemore Birdsong, M.D., Charlottesville; William E. Chapin, M.D., Richmond; Paul Hogg, M.D., Newport News; John O. Rydeen, M.D., Norfolk; John T. Walke, M.D., Roanoke.

ADVISORY TO WOMAN'S AUXILIARY: Charles L. Outland, M.D., *Chairman,* Richmond; Donald S. Daniel, M.D., *Vice-Chairman,* Richmond; James L. Hamner, M.D., Mannboro; Lloyd B. Burk, M.D., Arlington.

WALTER REED COMMISSION: H. A. Tabb, *Chairman,* Gloucester; Richard B. Bowles, M.D., Mathews; John R. Gill, M.D., Mathews.

MATERNAL HEALTH: H. H. Ware, Jr., M.D., *Chairman,* Richmond; L. L. Shamburger, M.D., Richmond; E. S. Groseclose, M.D., Lynchburg; A. Tyree Finch, M.D., Farmville; George S. Hurt, M.D., Roanoke; John R. Kight, M.D., Norfolk; Garrett Dalton, M.D., Radford; Walter L. McMann, M.D., Danville; Edwin Rucker, M.D., Richmond; W. N. Thornton, M.D., Charlottesville.

TO CONFER WITH STATE BOARD OF NURSE EXAMINERS: James M. Habel, M.D., *Chairman,* Suffolk; C. Bruce Morton, III, M.D., Charlottesville; Russell Buxton, M.D., Newport News; John A. Shackelford, M.D., Martinsville; Eugene L. Lowenberg; M.D., Norfolk; Frank Johns, M.D., Richmond; Malcolm H. Harris, M.D., West Point.

VENEREAL DISEASE CONTROL: Thomas W. Murrell, Jr.,

M.D., *Chairman,* Richmond; Edward P. Cawley, M.D., Charlottesville; Walter Fitzgerald, M.D., Danville; William Russell Jones, M.D., Richmond; James W. Love, M.D., Alexandria.

Tuberculosis: Everett C. Drash, M.D., *Chairman,* Charlottesville; George A. Welchons, M.D., Richmond; Wilkins J. Ozlin, M.D., South Hill; Carl W. LaFratta, M.D., Richmond; Charles W. Scott, M.D., Burkeville; Frank B. Stafford, M.D., Charlottesville.

Cerebral Palsey: Walter O. Klingman, M.D., *Chairman,* Charlottesville; O. Anderson Engh, M.D., Alexandria; George A. Duncan, M.D., Norfolk; Louise F. Galvin, M.D., Richmond; Roy M. Hoover, M.D., Roanoke; J. Hamilton Allan, M.D., Charlottesville.

Mental Hygiene: Rex Blankinship, M.D., *Chairman,* Richmond; David C. Wilson, M.D., Charlottesville; John R. Saunders, M.D., Richmond; Joseph R. Blalock, M.D., Marion; Thomas S. Edwards, M.D., Charlottesville; John B. McKee, M.D., Winchester; E. Bruce Mewborne, M.D., Newport News.

Rehabilitation: Roy M. Hoover, M.D., *Chairman,* Roanoke; Benjamin W. Rawles, Jr., M.D., *Vice-Chairman,* Richmond; Reno R. Porter, M.D., Richmond; George A. Duncan, M.D., Norfolk; Joseph R. Blalock, M.D., Marion; Edward E. Haddock, M.D., Richmond; A. Ray Dawson, M.D., Richmond; Leroy Smith, M.D., Richmond; Frank B. Stafford, M.D., Charlottesville; A. L. Carson, Jr., M.D., Richmond; W. E. Dickerson, M.D., Danville; G. S. Fitz-Hugh, M.D., Charlottesville; Fletcher J. Wright, Jr., M.D., Petersburg; Charles L. Savage, M.D., Waynesboro.

Cancer: George Cooper, Jr., M.D., *Chairman,* Charlottesville; Joseph W. Houck, M.D., Lynchburg; W. Ross Southward, M.D., Richmond; John R. Kight, M.D., Norfolk; A. C. Wyman, M.D., Alexandria; Frank D. Daniel, M.D., Charlottesville.

Advisory Heart: R. Earle Glendy, M.D., *Chairman,* Roanoke; J. Edwin Wood, Jr., M.D., Charlottesville; Paul D. Camp, M.D., Richmond; R. B. Grinnan, M.D., Norfolk; John B. McKee, M.D., Winchester; J. Franklin Waddill, M.D., Norfolk; Julian Q. Early, M.D., Bristol, Tennessee.

Conservation of Hearing: James Gorman, M.D., *Chairman,* Lynchburg; Francis McGovern, M.D., Danville; P. N. Pastore, M.D., Richmond; Neil Callahan, M.D., Norfolk; Fred Hamlin, M.D., Roanoke; Grant Preston, M.D., Harrisonburg; Fletcher Woodward, M.D., Charlottesville; J. H. Hopkins, M.D., Petersburg.

Federal Medical Services: Charles M. Caravati, M.D., *Chairman,* Richmond; John O. Boyd, Jr., M.D., Roanoke; W. L. Nalls, M.D., Alexandria; E. C. Drash, M.D., Charlottesville; Thomas W. Murrell, Jr., M.D., Richmond; Robert L. Payne, M.D., Norfolk.

American Medical Education Foundation: Richard Michaux, M.D., *Chairman,* Richmond; Hugh G. Stokes, Jr., M.D., Williamsburg; John R. Mapp, M.D., Nassawadox; Carrington Williams, Jr., M.D., Richmond; L. H. Bracey, M.D., South Hill; Clyde W. Vick, Jr., M.D., Petersburg; Walter McMann, M.D., Danville; Marcellus Johnson, III, M.D., Roanoke; Chester L. Riley, M.D., Winchester; Thomas S. Edwards, M.D., Charlottesville; Norman R. Tingle, M.D., Nuttsville; R. C. Potter, M.D., Marion; J. P. Sutherland, M.D., Grundy; H. Haskins Ferrell, M.D., Alexandria.

Liaison Committee to Confer with U.M.W. Welfare Fund: James P. Williams, M.D., *Chairman,* Richlands; Kinloch Nelson, M.D., Richmond; Mack I. Shanholtz, M.D., Richmond; John O. Boyd, Jr., M.D., Roanoke; Rufus P. Brittain, M.D., Tazewell; H. B. Mulholland, M.D., Charlottesville; William B. Barton, M.D., Stonega.

To Assist American Diabetes Association: William R. Jordan, M.D., *Chairman,* Richmond; Robert C. Crawford, M.D., Roanoke; W. Callier Salley, M.D., Norfolk; Thomas S. Edwards, M.D., Charlottesville.

National Emergency Medical Service: W. Ross Southward, Jr., M.D., *Chairman,* Richmond; Fletcher J. Wright, Jr., M.D., Petersburg; Walter P. Adams, M.D., Norfolk; E. C. Drash, M.D., Charlottesville; Frank A. Farmer, M.D., Roanoke; Kinloch Nelson, M.D., Richmond; James L. Hamner, M.D., Mannboro.

House: Harry J. Warthen, Jr., M.D., *Chairman,* Richmond; Donald S. Daniel, M.D., *Chairman,* Richmond; Fletcher J. Wright, Jr., M.D., Petersburg.

Polio: Lee E. Sutton, Jr., M.D., *Chairman,* Richmond; E. A. Harper, M.D., Lynchburg; Robert C. Hood, M.D., Arlington; Roy M. Hoover, M.D., Roanoke; McLemore Birdsong, M.D., Charlottesville; Mason Romaine, M.D., Petersburg.

Conservation of Sight: Edgar Childrey, Jr., M.D., *Chairman,* Richmond; Parker H. Lee, Jr., M.D., Lynchburg; William F. Hatcher, M.D., Roanoke; F. O. Fay, M.D., Norfolk; Meade C. Edmunds, M.D., Petersburg.

Executive Committee of Council: Guy W. Horsley, M.D., *Chairman,* Richmond; Walter P. Adams, M.D., Norfolk; Vincent W. Archer, M.D., Charlottesville.

Auditors Report

Officers and Councilors
The Medical Society of Virginia
Richmond, Virginia
Gentlemen:

We have made an examination of the books and records of The Medical Society of Virginia, Richmond, Virginia, for the fiscal year ended September 30, 1954, and have prepared therefrom the Balance Sheet, Exhibit "A" and Statement of Income and Expenses, Exhibit "B". With the exceptions noted in the immediately following paragraph, our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

We did not verify the accounts receivable by direct confirmation with the debtors, nor did we verify the accounts payable.

Subject to the exceptions stated in the preceding paragraph, it is our opinion that the accompanying Balance Sheet, Exhibit "A", and Statement of Income and Expenses, Exhibit "B", prepared on the cash receipts and disbursements basis, present fairly the financial condition of the Society at September 30, 1954, and the results of its operations for the year then ended in conformity with generally accepted principles of accounting, applied on a basis consistent with that of the preceding year.

Yours very truly,
MITCHELL, WIGGINS & SMITH
By R. E. WIGGINS
Certified Public Accountant

FINANCIAL CONDITION

The financial condition of the Society at September 30, 1954 is shown in the Balance Sheet, Exhibit "A", on the accrual basis. A summary thereof is presented below in comparison with the financial condition for the two preceding years:

	9-30-54	9-30-53	9-30-52
ASSETS			
Cash	$ 55,308.33	$ 48,583.79	$ 47,717.14
Accounts receivable	2,531.57	2,264.12	2,322.48
Investments	43,134.02	41,851.50	33,341.00
Fixed assets	43,061.10	43,061.10	43,061.10
TOTAL—ALL FUNDS	$144,035.02	$135,760.51	$126,441.72
LIABILITIES, SURPLUS AND FUND BALANCE			
Liabilities:			
Accounts payable	$ 1,323.02	$ 1,443.20	$ 1,216.06
Surplus:			
General Fund	99,650.90	91,256.21	82,164.56
Fund Balance:			
Plant Fund	43,061.10	43,061.10	43,061.10
TOTAL—ALL FUNDS	$144,035.02	$135,760.51	$126,441.72

Analyses and explanation of the more important balance sheet items follow:

CASH—$55,308.33

All recorded cash receipts were accounted for by deposits in the banks, and disbursements were supported by properly signed and endorsed paid checks. Balances on deposit at September 30, 1954 were confirmed by direct correspondence with the banks as follows:

First and Merchants National Bank—Checking account	$ 47,356.49
First and Merchants National Bank—Savings account	6,870.00
The Bank of Virginia—Savings account	40.32
Southern Bank and Trust Company—Savings account	1,041.52
TOTAL	$ 55,308.33

INVESTMENTS—$43,134.02

United States Savings Bonds, as shown in Schedule 1, were verified by inspection of the securities held in a safe deposit box at First and Merchants National Bank, Richmond, Virginia. They are shown in the Balance Sheet at their current redemption value.

Certificate of deposit was verified by direct correspondence with the Bank of Virginia.

FIXED ASSETS—$43,061.10

Details of the fixed assets carried in the Plant Fund are shown in Schedule 2. No indebtedness against these assets was disclosed by the records.

OPERATIONS

The income and expenses for the fiscal year ended September 30, 1954 are shown in Exhibit "B", prepared on the cash receipts and disbursements basis. A summary of income and expenses in comparison with that of the two preceding years is presented as follows:

	FISCAL YEAR ENDED		
	9-30-54	9-30-53	9-30-52
INCOME			
Membership dues	$46,028.26	$45,754.91	$43,470.10
Medical monthly publication	20,075.39	17,835.74	18,122.56
Commercial exhibits	-	-	2,030.61
Other income	543.93	708.98	662.79
TOTAL	$66,647.58	$64,299.63	$64,286.06
EXPENSES			
Executive office	$58,106.62	$53,573.12	$56,348.70
Public relations department	1,816.42	2,351.06	1,130.64
TOTAL	$59,923.04	$55,924.18	$57,479.34
INCOME OVER EXPENSES	$ 6,724.54	$ 8,375.45	$ 6,806.72

IN GENERAL

The bookkeeping records were found to have been kept in a satisfactory manner.

Insurance in force at September 30, 1954 determined from policies on file was as listed below:

FIRE	
Office furniture and fixtures	$ 6,000.00
Building—1105 West Franklin Street, Richmind, Virginia	26,000.00
Walter Reed House, Belroi, Virginia	2,000.00
LIABILITY—OWNER'S, LANDLORD'S AND TENANT'S	
Bodily injury	$25,000.00 - $50,000.00
Property damage	5,000.00
FIDELITY BONDS	
Executive Secretary-Treasurer	5,000.00
Secretary	5,000.00

BALANCE SHEET—SEPTEMBER 30, 1954

GENERAL FUND

ASSETS

CURRENT ASSETS		
Cash in bank		$55,308.33
Accounts receivable:		
Due from members—Estimated collectible value—1954 Dues—50 @ $25.00	$ 1,250.00	
Advertising—Virginia Medical Monthly	1,281.51	2,531.57
TOTAL CURRENT ASSETS		$57,839.90
INVESTMENTS		
United States Savings Bonds—Present value (Schedule 1)	$35,446.00	

Certificate of deposit—Bank of Virginia	7,688.02	43,134.02
		$100,973.92

PLANT FUND

LAND AND BUILDINGS—At cost (Schedule 2)		$35,061.10
OFFICE FURNITURE AND EQUIPMENT (Schedule 2)		
At cost	$ 951.65	
Estimated insurable value	7,048.35	8,000.00
		$43,061.10

LIABILITIES AND SURPLUS

EXHIBIT "A"

Accounts payable:	
Preparation of Medical Journal—September 1954	$ 1,323.02
SURPLUS	
Unrestricted—Available for appropriation	99,650.90
	$100,973.92
FUND BALANCE	$ 43,061.10
	$ 43,061.10

STATEMENT OF INCOME AND EXPENSES

For the Fiscal Year Ended September 30, 1954

EXHIBIT "B"

	ACTUAL		BUDGET
GROSS INCOME			
Membership dues		$46,028.26	
History of Medicine in Virginia		72.50	
Interest on savings account		137.56	
American Medical Association		333.87	
Virginia Medical Monthly:			
Advertising	$19,725.74		
Subscriptions—Non-Members	349.65	20,075.39	
TOTAL		$66,647.58	
EXPENSES			
Executive Office:			
Salaries		$22,596.66	$25,030.00
Telephone and telegrams		1,234.66	1,500.00
Postage		472.62	750.00
Stationery and office supplies		687.43	750.00
Office equipment—Repairs and replacements		190.70	500.00
Building maintenance and repairs—Net		2,250.68	3,000.00
Convention expenses—Net		(688.56)	2,300.00
Council expenses		63.00	325.00
Delegates and executive assistant to A.M.A.		1,592.41	2,400.00
President's expenses		271.56	1,000.00
Traveling expenses		1,333.79	2,000.00
Preparation and distribution of Medical Journal		16,883.84	18,000.00
Scientific exhibits		2,025.66	2,500.00
Post-Graduate Medical Education Committee		239.65	1,000.00
Legislative Committee		1,700.00	1,500.00
Walter Reed Commission		243.05	250.00
Cancer control		358.43	400.00
Miscellaneous health service committees		287.30	600.00
Woman's auxiliary		100.00	100.00
Membership dues — Affiliated agencies		106.50	85.00
Special appropriations:			
Virginia Council Health and Medical Care		2,000.00	2,000.00
American Medical Education Foundation		2,000.00	2,000.00
National Society Medical Research		150.00	150.00
A.M.A. Reception for Dr. Martin		976.93	1,000.00
Ephraim McDowell Monument —Relocation		132.44	200.00
Student — American Medical Association		200.00	200.00
Social security taxes		361.32	375.00
Miscellaneous		336.55	500.00
TOTAL EXECUTIVE OFFICE		$58,106.62	$70,415.00
Public Relations Department:			
Conference expenses		$ 485.86	$ 750.00
Radio and press		299.25	400.00
Literature and bulletins		911.31	1,250.00
Exhibits		120.00	250.00
TOTAL—PUBLIC RELATIONS DEPARTMENT		$ 1,816.42	$ 2,650.00
TOTAL EXPENSES		$59,923.04	$73,065.00
EXCESS OF INCOME OVER EXPENSES		$ 6,724.54	

FIXED ASSETS

September 30, 1954

SCHEDULE 2

PLANT FUND

LAND AND BUILDINGS—At cost		
Walter Reed House, Belroi, Virginia		$ 1,000.00
Office building—1105 West Franklin Street, Richmond, Virginia		34,061.10
TOTAL LAND AND BUILDINGS		$35,061.10
OFFICE FURNITURE AND EQUIPMENT		
Estimated insurable value at October 1, 1950		$ 7,048.35
Purchased during year ended September 30, 1951:		
Adding machine	$100.00	
Addressograph—Multigraph stand	127.50	

Protectograph—Check writer	110.30	
Typewriter	156.20	
File cabinets (2)	71.50	
Vacuum cleaner	69.95	
Desks and chairs (2)	316.20	951.65
TOTAL OFFICE FURNITURE AND EQUIPMENT		$ 8,000.00
TOTAL FIXED ASSETS		$43,061.10

INVESTMENT BONDS
September 30, 1954
SCHEDULE 1

TYPE OF BONDS	SERIES	NO. BONDS	DATED	DUE	VALUE AT MATURITY	COST	VALUE AT 9-30-53	VALUE AT 9-30-54
U. S. Savings	F	10	2-1-43	2-1-55	$ 5,000.00	$ 3,700.00	$ 4,725.00	$ 4,900.00
U. S. Savings	F	17	12-1-43	12-1-55	8,500.00	6,290.00	7,769.00	8,032.50
U. S. Savings	F	1	1-1-44	1-1-56	500.00	370.00	457.00	472.50
U. S. Savings	F	3	2-1-44	2-1-56	1,500.00	1,110.00	1,371.00	1,417.50
U. S. Savings	F	2	6-1-44	6-1-56	1,000.00	740.00	900.00	929.00
U. S. Savings	F	2	12-1-44	12-1-56	1,000.00	740.00	887.00	914.00
U. S. Savings	F	2	5-1-45	5-1-57	1,000.00	740.00	874.00	900.00
U. S. Savings	F	7	11-1-45	11-1-57	7,000.00	5,180.00	6,027.00	6,209.00
U. S. Savings	F	1	3-1-46	3-1-58	500.00	370.00	430.50	443.50
U. S. Savings	F	10	3-1-46	3-1-58	10,000.00	7,400.00	8,610.00	8,870.00
U. S. Savings	F	6	10-1-49	10-1-61	3,000.00	2,220.00	2,301.00	2,358.00
TOTALS					$39,000.00	$28,860.00	$34,351.50	$35,446.00

Life Members—Fifty Year Club—1954

Dr. Paul Vernon Anderson, Richmond
Dr. Elisha Barksdale, Lynchburg
Dr. Charles Singleton Dodd, Petersburg
Dr. William Thomas Dodd, Chase City
Dr. John Milton Gouldin, Tappahannock
Dr. Ernest L. Grubbs, Front Royal
Dr. George Wesley Hooker, Roanoke
Dr. Hatley Norton Mason, Richmond
Dr. Edward Howe Miller, Danville
Dr. William McMath Revercomb, Clifton Forge
Dr. Stuart Wray Selden, Kents Store
Dr. William Almon Shepherd, Richmond
Dr. Thomas Watkins, Drakes Branch
Dr. William C. Webb, Disputanta
Dr. John Mason Williams, Petersburg
Dr. Edward Franklin Younger, Lynchburg

1955 Virginia March of Dimes.

The polio attack rate in Virginia in the year just ended was about 30 percent lower than the national average, according to provisional reports. Nationwide, the number of cases reported in 1954 was the third highest on record.

Yet in 1950, when 1,200 polio cases were reported, the attack rate in Virginia was 65 percent higher than the national average. It is impossible to predict where and when polio epidemics will strike which underlines the need for more effective control measures.

Evaluation of the Salk vaccine, administered to 440,000 U. S. children, in the largest medical experiment of its kind ever conducted, is now in progress. Announcement of the vaccine's effectiveness will be made in the Spring of 1955.

During the field trials last Spring about 11,000 children in the state of Virginia were inoculated with the Salk Vaccine.

It is hoped that Virginia physicians will support the 1955 March of Dimes as enthusiastically as approximately 20,000 physicians throughout the United States cooperated in the 1954 vaccine field trials sponsored by the National Foundation for Infantile Paralysis.

Public Relations . . . .

Annual Conference.

The Annual Public Relations Conference of The Medical Society of Virginia was held on Thursday, November 18, at Charlottesville's Hotel Monticello, and attracted a registration of fifty. Included in that number were representatives of the Woman's Auxiliary and the following twelve component societies: Alexandria, Albemarle County, Arlington County, Augusta County, Fredericksburg, Fourth District, Lynchburg Academy, Norfolk County, Patrick-Henry Counties, Richmond Academy, Roanoke Academy, and Southwestern Virginia.

Dr. Harry C. Bates, Jr., Public Relations Committee chairman, opened the program with a progress report on PR activities, and stated that over 67,000 pieces of literature had been distributed by the committee during the year. He further reported that 535 radio and 26 TV programs had been presented since the first of February. Dr. Bates observed that 20 communities are currently receiving (by Welcome Wagons) material stressing the importance of a family physician.

The success story of three Virginia communities with reference to public medical forums was told by physicians who helped make it possible. Dr. W. H. Barney, speaking on the Lynchburg forums, stressed the importance of employing lay terminology. He also recommended the use of tape recorders for rehearsals. Dr. Barney reported that of 55 questionnaires returned by members of his society, only one expressed any doubt concerning the forums.

Dr. Mason C. Andrews, Norfolk, declared that the forums in his area had attracted tremendous audiences and that his society was well pleased. He noted, however, that there are a few topics which seem to hold more appeal than others. They are heart, cancer, common cold, child care, etc. It was Dr. Andrews' opinion that the forums served to orientate the public and bring it much closer to the local medical society.

Commenting on the Alexandria forums, Dr. Christopher J. Murphy, Jr., stated that the programs had been unusually well received and the local society had been requested to present them again during the coming year. Dr. Murphy reported that panel members were selected without regard to specialty and were identified in the newspapers only as members of the local medical society. It was believed that some questions should be received from the floor in order that the audience might feel that they were definitely participating.

Next on the program was a panel discussion of the various night and emergency call systems found in Virginia. Dr. W. T. Thompson, Richmond, told of that city's monitoring system which has recently gone into effect. Under this system, a monitoring physician is somewhat like a captain of a team, in that he has several alternatives in making a decision concerning each call.

Dr. Sidney Lyons, Arlington, described the system used in his area, and recommended it for medium sized communities. Calls are received by the Medical Bureau, and an effort made to locate the family physician (if there is one), and failing this, a physician of the patient's choice. If this is not successful, the names of three physicians living in the patient's vicinity are suggested. If this, too, fails, then the physician on call is contacted. Dr. Lyons stressed that this type of system is strictly an insurance policy— very necessary when an emergency arises.

The system in the Radford-Pulaski area was described by Dr. Andrew F. Giesen, who stated that the system revolved around the hospital. Since nearly every physician is on the staff, it greatly simplifies matters for the switchboard operator.

A proposed PR program for the schools was next discussed. It was suggested that films designed especially for high school students concerning their future in the professions (medical and nursing) be shown. The Woman's Auxiliary has long carried on an extensive nurse recruitment program, and this type program could well be a joint project. It was further brought out that component societies could help get the program into the schools by clearing the way with the superintendents of schools and high school principals in their areas.

The afternoon session was concluded with a discussion of the latest radio transcriptions available from the State Office and the premier showing in Virginia of the new TV film "A Life to Save". It is hoped that this film will soon be shown by all Virginia TV stations.

Following a cocktail party and dinner, Dr. Thomas H. Hunter, Dean of the University of Virginia Medical School, called for improved communications by

the public and the profession. Dr. Hunter stated that "language barriers" contributed greatly to this condition. According to Dr. Hunter, medical people too often speak in a language difficult for the layman to understand. Lay writers have extreme difficulty in communicating this language to the public without distortion.

Contributing also to poor communication, stated Dr. Hunter, are fear of publicity seeking charges and fear of being misinterpreted. Dr. Hunter went on to say that scientists should make every effort to see that the public is properly informed. However, he added that the scientists should demand complete freedom of inquiry and must make sure that the public understands what they are about and why. Only in this way will they be granted the freedom which they must have.

"Biggest Bargain."

Korea is "the world's greatest bargain for investments in humanitarian projects," according to a medical consultant to the United Nations secretariat. Dr. Howard A. Rusk, New York University College of Medicine, said that Korea has "an extremely difficult problem" but is doing a big job with very little money. Through emergency help, the United Nations Korean Civil Assistance Command and its Korean counterparts have "achieved one of the world's truly remarkable results in the control of epidemic diseases . . . in an unbelievably short time."

But Dr. Rusk said the rest of the situation in Korea could be understood by picturing any American city of 25,000 with one fourth of the homes destroyed and another fourth unroofed or damaged, sewers destroyed, 1,250 persons with tuberculosis, almost every one chronically undernourished, scores blind or with leprosy—and only one poorly trained doctor.

The primary need is for trained personnel. Only 3,500 of the 6,800 medical practitioners have medical school training, and nearly half of the country's 5,000 doctors of medicine are in the army, leaving 2,500 to care for more than 20 million persons.

With about $600,000 of voluntary contributions, the American-Korean Foundation has started the first school of public health in Korea, reestablished nursing schools, and set up short course in tuberculosis control, midwifery, and nursing. A rehabilitation center for the physically handicapped and national programs for tuberculosis and leprosy control have been started.

This can be done only because of the tremendous buying power of a dollar in Korea. A student can attend medical school for four years for $1200. For $20 apiece, 2,000 American physicians bought goods for two suits and a raincoat each for the same number of Korean doctors.

Other voluntary contributions have been made: 70,000 textbooks have been contributed by American book publishers in answer to an appeal in the Journal of the American Medical Association, and the drug industry has sent more than $2,250,000 in drugs and medicines through the American-Korean Foundation. One carload worth $300,000 was sent by one company. A surgical appliance company contributed an entire carload of brace parts valued at $60,000.

Dr. Rusk said in the November Today's Health magazine, published by the A.M.A., that it is "not surprising" that health professions have responded enthusiastically. "We in America have always been proud of the spirit of voluntary service shown by members of the health professions," he said. "We have untold confidence in our men and women in white, for they have long symbolized mercy and compassion. Today our health professions, by their voluntary aid to Korea, are once more demonstrating that this confidence is well merited."

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department of Mental Hygiene and Hospitals.

A Four-Part Psychological Program

Before considering the present topic it is thought in order to discuss briefly the typical psychological program in the average mental hospital generally and, more specifically, a certain common, irritating problem with which the pychologist has to contend in fulfilling his role in such a program.

As is well known mainly to professional personnel dealing with the mentally ill, the psychological work performed in the mental hospital situation usually consists of two general types of activity, namely, assisting in diagnosis and contributing to therapy. The former, which is the psychologist's primary responsibility in most hospitals, involves the employment of two types of procedures. The first of these is the application of Psychometrics to new patients as a supplemental aid to the psychiatric examination. Such tests—they are of several varieties—mainly serve the *quantitative* function of determining the degree of innate general mental ability possessed by the patient, and the efficiency of his individual mental ability possessed by the patient, and the efficiency of his individual mental processes. They also measure any *acquired* deficiencies in these spheres produced by whatever functional or organic processes may be present. Furthermore, some of the more recent types of psychometrics also contribute a *qualitative* estimate of the personality condition which, although much less accurate than the quantitative, is obviously more closely related to the function of the conventional psychiatric examination.

The second diagnostic procedure—and this is much more precise than the aforementioned minor contribution of psychometrics—is the application of Projective Techniques; these are strictly qualitative in nature, and they delve into the content of the lower levels of the conscious and subconscious mental and emotional processes. As would be expected, the pathological material brought to light by these techniques is much more similar to that produced by the psychiatric examination. Furthermore, whereas the psychometrics might be considered by many as serving a subordinate, or merely supplemental, purpose in diagnosis, the projective techniques, being superior, are generally thought to complement the psychiatric very strongly. Incidentally, both procedures are occasionally employed from time to time to reexamine older cases in order to ascertain any possible personality changes which may have occurred since the time of the patient's admission to the hospital.

The second general duty of the mental hospital psychologist, i.e., contributing to therapy, involves the application of the few types of *psychological* means he may have at his disposal. In the writer's opinion it is here that the greatest limiting factor is found, namely, the paucity of strictly psychological therapeutic techniques. Although there are many available forms of psychotherapy for treating the neuroses, juvenile behavior disorders, et cetera, outside the hospital, there are definitely fewer methods which are very effective with the psychoses, especially before some degree of insight has been regained by the patient. (It is of course true that there are such psychologically-slanted methods in mental hospitals as occupational therapy, bibliotherapy, music therapy, the use of dramatics, etc., which serve the general purposes of drawing the patient's attention from himself; allowing self-expression in both abstract and concrete ways; and various other methods of gradually re-introducing the patient to his former normal way of living. In so doing, such methods make the psychologic milieu more conductive to the patient's recovery largely by aiding him to gradually help himself. From the therapist's standpoint the writer cannot help but think of these methods as of a somewhat "passive" and "indirect" nature in eliminating the psychotic condition, albeit quite effective in many instances. However, these are independent branches of therapy in their own right, and have their own highly specialized practitioners).

The psychologist, therefore, needs a more "active" form of therapy with which he can attack the psychoses more *directly*. Unfortunately, he finds few available types which are designed specifically to deal with such difficult, more or less "intangible" personality disorders—such methods as are available for treating the neuroses. Consequently, since the mental hospital population is almost exclusively psychotic, this situation necessarily forces the psychologist to

Article prepared by John A. Blake, M.A., Chief Psychologist, Central State Hospital, Petersburg, Virginia.

subordinate his therapeutic efforts to those in the interest of diagnosis. It is encouraging to note, however, that this imbalanced situation is beginning to improve as newer therapeutic techniques are appearing on the horizon.

When the writer first assumed his present position at Central State Hospital in September 1951, there were merely the two aforementioned conventional activities in effect, with the diagnostic activities definitely given more time and effort than the therapeutic, on the part of the psychologist. Today, however, they are given more even weight; in fact, perhaps somewhat more emphasis is being given to psychotherapy. This will be discussed at greater length later in the report.

At the present time the psychological program comprises four major types of activity. Briefly, these are first, the routine testing of new patients and the occasional retesting of old cases when necessary; second, greatly augmented psychotherapeutic activity both in new and old cases; third, the teaching of visiting student nurses from two Virginia training hospitals, and part-time instruction of new attendants; and fourth, a periodic reexamination of the personality status of old back-ward cases, which is in close conjunction with the second part of the program, psychotherapy, as now applied. Each of these will now be considered at more length.

Concerning the testing and application of the projective techniques there is little to be said. Both activities have been enlarged and a greater variety of tests are administered when necessary. Moreover, the techniques are now being used more routinely than in the past, when only the criminally-insane were required to receive them. This is not to say, however, that all current psychotic cases routinely receive a Rorschach or other projective technique, nor necessarily even an entire battery of tests, but we now have a more nearly sufficient number of staff members to make both possible when the need arises.

The second part of the program, dealing with psychotherapy, has definitely been augmented as mentioned before. This is largely because the writer has long felt that, irrespective of however thoroughly one may test a patient and, consequently, benefit *oneself* by increasing his own knowledge of the patient—most of such data serves practically the one and only purpose of confirming the psychiatric findings—there is, up to this point, positively no concrete benefit derived *by the patient;* only if and when active psychotherapy is begun and pushed vigorously does the patient himself benefit! The ultimate objective of hospitalization is not the amassing of innumerable data on the patient by entire batteries of tests, observations, analyses, etc., leading to a final diagnosis, but rather complete recovery of the patient by means of all forms of successful therapy! The writer has found that such an opinion among some psychologists, as regards their duty to the patient, is not as obvious as one might think.

The third part of the program, the teaching of visiting student nurses, was begun in 1952 when the first group came from Dixie and Piedmont training hospitals to obtain the psychiatric training required by the State Board. This and succeeding groups spent three months in Central State Hospital during which time they received three major courses; the first or basic course entitled, "The Origin, Structure, Function, and Minor Deviations of the Normal Personality", is regularly given by the writer during the first six weeks of each quarter, with the exception of the summer period. The other courses deal with psychiatry and psychiatric nursing. As mentioned before, one of our staff is called upon from time to time to give psychological instruction to new attendants in training also. Both teaching programs not only serve the useful purpose of better preparing the nurses and attendants, but they also have a very stimulating effect on the teachers, especially on the writer who taught for some years before coming to the hospital.

The fourth aspect of our program deals with a periodic reexamination of older cases in the wards. Having had psychiatric as well as psychological training many years ago, the writer initiated this work during the fall of 1951. (Closely associated with this is a rather new form of psychotherapy devised by the writer; and this is applied, under the general supervision of the Superintendent, to both new and old cases after the examination is made. Since this method of psychotherapy is still considered to be in the experimental stage, and revisions are being made from time to time, the writer does not feel that it is yet ready for publication). When a patient, new or old, is rechecked for his personality condition, a careful report is written up in the progress notes of the case record, and a list of such cases is given to both the Superintendent and the doctors concerned periodically. In this way the patients' conditions are not only ascertained at the time, but constructive therapy is administered to effect improvement which, in turn, will be rechecked at the next session, when more psychotherapy will be given. Although we

cannot say at this time just how effective these therapeutic sessions are, we expect to be able to do so in the not too distant future. The writer modestly believes that the periodic reexaminations of the patients, even without the added therapy, does serve a very useful purpose in aiding the overworked doctors in several obvious ways.

Such, then, is the four-part psychological program at Central State Hospital. How rapidly it will develop, and how far it will advance, only the future can tell. Naturally, we who work in the program would like to see all the activities, especially the teaching and the psychotherapy, expand continuously through the years. If, after sufficient time has passed to further develop the program, and sufficient results have been obtained to validate our procedures, other psychologists in the state and elsewhere might wish to adopt our methods, we would be most pleased to share them. Meanwhile, the members of our psychology staff are continuing to employ the methods daily, and are looking toward the day when they will be fully validated.

BOOK ANNOUNCEMENTS

The Microphysical World. By WILLIAM WILSON, Ph.D. (Leipzig), D.Sc. (London), F.R.S., Fellow of King's College, London, and Professor Emeritus of Physics in the University of London. Philosophical Library, New York. 1954. xii-216 pages. Cloth. Price $3.75.

The Rauwolfia Story. From Primitive Medicine to Alkaloidal Therapy. Ciba Pharmaceutical Products, Inc., Summit, N. J. 1954. 63 pages.

Color Atlas of Pathology. Endocrine System, Including Pituitary, Thyroid, Parathyroid, Adrens and Pancreas; Gynecology and Obstetrics, Including Reproductive Organs; Breasts; Male Genital Tract; Skin. J. B. Lippincott Company, Philadelphia. 1954. Prepared under the auspices of the U. S. Naval Medical School of the National Naval Medical Center, Bethesda, Maryland. x-450 pages. Illustrated with 1032 figures in color on 343 plates. Price $20.00.

Clinical Aspects of the Autonomic Nervous System. By L. A. GILLILAN, Ph.D., M.B., Associate Professor of Anatomy, Graduate School of Medicine, University of Pennsylvania. Little, Brown and Company, Boston. 1954. xii-316 pages. With 42 Illustrations. Cloth. Price $6.50.

Although modern technology and therapeutics have brought about a rapid advance in the treatment of physical illness, the increased difficulties and stress of everyday living have led to, in many instances, increased cases of mental illness among the present-day population. This, in turn, has posed numerous problems, both to the physician as well as to the general society. This monograph is an excellent review of some of the problems confronting the clinician today with regard to the autonomic nervous system and its role in body function. As pointed out by Dr. Gillilan in his introduction, no new material is presented, but there has been a correlation and arrangement of the assembled facts in a manner that the clinician will be able to apply them in his practice.

The book is divided into two sections. Part I deals with the anatomy of the autonomic nervous system, whereas Part II is concerned with the innervation of visceral organs and systems, with the clinical applications. The review of the anatomy of the autonomics is good, and the presentation of text material is greatly aided by many diagrams. Furthermore, the author brings out on numerous occasions the intimate relationship existing between an anatomical lesion and the clinical syndrome. Thus, there results an integration of morphology and physiology in a manner which aid in explanation of dysfunction.

The text material is well documented with numercus references, and the author has compiled a notable bibliography. This book is a worthy addition to the library of physicians, anatomists, and physiologists interested in the autonomic nervous system.

L. F. CAVAZOS.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Influenza

The symptoms of influenza are very similar to those of the common cold, acute catarrhal inflammations with fever, and acute respiratory infections of a minor type. The onset is abrupt, usually with chills or chilliness, headache, muscular pains and fever. Prostration is marked and there may be cough and nasal symptoms. The duration is short, the fever lasting from one to seven days. Convalescence is usually uneventful though secondary infections may complicate the picture.

Influenza is an epidemic disease. The epidemics are variable in extent, duration, and severity. No part of the world is free from the disease for a long period of time. In temperate zones nearly all epidemics have had their peaks between November and the following May. Sporadic cases may occur during any month of the year. The mode of survival of influenza virus between epidemics is not known. There have been two theories advanced: one is that there may be extrahuman reservoirs and the other is that there may be survival in the human host.

Influenza spreads rapidly in communities and is transmitted, as are other acute respiratory diseases, through direct contact in talking, coughing or sneezing and through contact with articles contaminated with secretions from the upper respiratory tract. The short incubation period (24 to 72 hours) and the large proportion of subclinical cases and of mild ambulatory infections contribute to the rapid spread of the infection.

The virus of influenza has been grouped into A, B, C, and D and the first two of these have been studied rather extensively. Virus A had been identified in cases occurring in epidemics in certain years and virus B has been isolated from cases occurring in epidemics in certain other years. It is known that in both of these groups there are strains having sufficient antigenic differences to produce failure in development of complete protection against the whole group following recovery from infection with this particular strain of group A or group B. This brings out the fact that there is constantly present a large group of susceptible individuals in the population who lack immunity against not only the prevailing virus group, but also against the prevailing virus strain.

In 1951 the State Health Department cooperated with the U. S. Public Health Service in originating an influenza study in the metropolitan area of Norfolk. The 1952-53 study was expanded to include two additional areas in Norfolk and two areas in Arlington County, a part of the metropolitan area of Washington, D. C. These studies were continued in 1953-54 and are being carried on in the current months. The chief immediate objectives of these studies are: (1) to provide an opportunity to observe the clinical nature and mode of occurrence of acute, febrile, respiratory illnesses in family households of various communities; (2) to obtain throat swabs, washings, and cultures and acute and convalescent serum specimens from persons with such illness in an effort to identify a microbiological cause; (3) to identify, if possible, the clinical-epidemiologic attributes associated with the natural occurrence of influenza and other acute febrile illnesses; (4) to study the effectiveness and reactions and to learn more about the nature and duration of influenza vaccine prophylaxis.

In 1947, the Interim Commission of the World Health Organization initiated a world-wide network of influenza laboratories by setting up the World Influenza Centre in London for the study and comparison of strains of virus isolated in different parts of the world. Prior to this a similar network had been set up in the United States by the Armed Service Commission on Influenza. The work of these laboratories continues summer and winter. New strains causing epidemics during the winter in the southern hemisphere (our summer) may spread to the northern hemisphere to cause outbreaks a few months later. These studies permit advance knowledge of the strains of virus that may be more effective for the particular season that is approaching.

Influenza vaccine does not produce as lasting or as complete immunity as, for example, does smallpox vaccination. The vaccine at present under test is not able to eliminate the disease, but it can reduce the number of people who fall sick and thereby diminish the economic effects of an epidemic, which are sometimes serious. It is impracticable to vaccinate the whole population each year because of the great expense and difficulties involved. Influenza

vaccines will play a principal role in lessening the effects of influenza epidemics in the future. They do not give hope of eliminating the disease altogether. Further research and careful observations are needed to point to the best methods of preparation and use of influenza vaccines.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	Nov. 1954	Nov. 1953	Jan.-Nov. 1954	Jan.-Nov. 1953
Brucellosis	2	4	43	56
Diphtheria	5	8	33	80
Hepatitis	115	234	3397	2293
Measles	82	77	23616	4805
Meningitis (meningococcal)	6	4	90	173
Poliomyelitis	38	41	586	724
Rocky Mt. Spotted Fever	0	0	41	59
Streptococcal Infections (Including Scarlet Fever)	264	315	4266	5007
Tularemia	1	5	32	30
Typhoid Fever	7	5	58	52
Rabies in Animals	29	30	340	412

Medical Journal Celebrates 60th Anniversary.

Passing another milestone is the medical journal, Therapeutic Notes, which this year celebrates its 60th anniversary. Begun in 1894, the "parent edition" of this journal is sent by Parke, Davis & Company to approximately 175,000 physicians and allied professional people. Five other editions are published—British, Australian, Spanish, French and Portuguese—to give a world-wide circulation of 500,000 in every country outside the Iron Curtain. Originally printed in hand-bill style with large blocks of black type, Therapeutic Notes now is run off in four-colors with eye-appealing layout.

Clinical Evaluation of a New Antihistaminic.

Commonly used antihistaminic agents have been found to produce sedation in 10 to 60 per cent of patients receiving these drugs. (Johnson, H. J., Jr.: Amer. Prac. 5:862, Nov. 1954) Because of apparent advantages over most other antihistamines now in use, a new antihistaminic, Clistin Maleate, was studied from a practical clinical viewpoint—and it appears to answer the need where effective control of allergic symptoms with little risk of sedation is important.

Clistin Maleate (Carbinoxamine Maleate) was administered to 116 patients (79 males, 37 females) in doses of 2 mg. or 4 mg. every 3 to 12 hours, depending on circumstances. Of the total 116 patients, 87 per cent reported some relief of symptoms following administration of Clistin Maleate; in 76 per cent the relief was graded as moderate to complete. In the group of 77 patients with acute rhinitis, 81 per cent reported moderate to complete relief of their symptoms.

Undesirable side effects from the use of Clistin were infrequent and usually mild in nature:

No undesirable side effects	80%
Mild, transient sedation	9%
Moderate sedation	4%
Severe sedation	7%

Two individuals complained of dryness of mouth; one of dizziness; one of headache; one tingling of the scalp.

On the basis of effectiveness in controlling symptoms of allergic diseases, Clistin Maleate appears to compare favorably with the most potent antihistaminic drugs, yet has a relatively low sedative liability when taken in dosage sufficient to control symptoms. It seems to possess the advantages of potent antihistaminic action and weak sedative properties.

Although the value of antihistaminic drugs in prophylaxis or abortion of the common cold is controversial, these drugs often give symptomatic relief of profuse nasal secretions, especially when given at the onset of symptoms. This was the case when Clistin was given to patients with acute rhinitis which appeared to be non-allergic.

Notes On Pulmonary Tuberculosis . . . .

Modern Therapy VI

Rest vs Exercise

In the absence of completely curative medicinal or surgical therapy, systemic (body) rest[1] is still generally conceded by the medical profession to be *the* basic treatment for virtually *all* cases of active pulmonary tuberculosis. If one accepts the simplified concept that the *active* component of the disease is the only one which *ever* requires treatment (See September issue, Virginia Medical Monthly), it follows that rest (*conservation* of energy) is the *only* constitutional therapy applicable to pulmonary tuberculosis, *from start to finish.* Its direct antithesis, exercise (*expenditure* of energy), even now seldom ever prescribed as such for active pulmonary tuberculosis *with acute symptoms,* would then, in addition, be automatically and *entirely* ruled out of the picture *from beginning to end* as a therapeutic agent. Adoption of this theory as a working hypothesis would dispel much of the confusion which currently prevails in the minds of many, from having witnessed or read about the *simultaneous* prescription of these mutually exclusive entities ("Rest" and "Exercise") for the *same* patient.

Exercise in Relation to Tuberculin Therapy

For years it was taught that "allergy" (induced sensitivity to tuberculin) and "immunity" (natural and acquired host resistance to tuberculous infection or disease) were merely different manifestations of a single phenomenon—sometimes fluctuating separately as regards degree or intensity—but nevertheless *inter*dependent, with a tendency to parallel one another.

The concept that a mild allergic reaction or response to tuberculin would concomitantly increase immunity and thus promote healing (through mild "focal reaction" within the tuberculous lesion) naturally was exploited early and for years provided rationale for periodic injection of tuberculin with therapeutic intent by a few of the more daring tuberculosis specialists.

According to this hypothesis there appeared to be good reason to prescribe, should one prefer, physical exercise (in lieu of injections of tuberculin) to produce a correspondingly beneficent effect, through slight increase in production and absorption of tuberculin from active tuberculous processes within the body (as a result of the exercise). When prescribed with this objective in mind, "exercise" was, of course, properly looked upon as a definite therapeutic weapon, in its own right. However, recourse to exercise for this purpose had the unfortunate disadvantage of substituting, for the much more dependable and scientific method of administering tuberculin by needle, a procedure whereby the dosage of tuberculin (derived from within the body) could not be measured accurately or carefully controlled.

Since it had long been recognized that injection of tuberculin for therapeutic purposes was potentially dangerous unless administered with consummate skill and meticulousness, it gradually became apparent to most that the less carefully it was administered (as through exercise) the more dangerous it could become. *This realization eventually led to the virtual abandonment of the use of exercise, in and of itself, as a therapeutic agent in pulmonary tuberculosis,* and treatment of the disease became much easier for the general practitioner (and others) to understand and to supervise.

In recent years evidence has accumulated to suggest that allergy and immunity are completely dissociable phenomena—that variations in either do not necessarily affect the other appreciably if at all. This new insight provides a theoretical basis for use of tuberculin injections, therapeutically, to bring about varying degrees of *de*sensitization; presumably, after having been rendered essentially non-allergic, the patient's immunity would remain intact. Inasmuch as most if not all acute alarming manifestations of pulmonary tuberculosis are considered to be allergic in origin and character, and the more allergic or hypersensitive the patient is, the more susceptible will he be to acute exacerbations of this kind, the latter's outlook for recovery *should* naturally be enhanced by his partial or complete desensitization to tuberculin.

In actual practice it has been found that many patients can be completely and apparently safely *skin*-desensitized, at least, by expertly and closely supervised administration of gradually increasing doses of tuberculin injected subcutaneously. This state can be maintained for long periods by appropriately spaced injections. However, to the knowledge of the State Health Department, *physical exercise has never been prescribed, in place of tuberculin injections, to achieve desensitization.* Again, exer-

Prepared by the Virginia State Health Department

1—Includes, but is by no means limited to *rest in bed.*

cise per se, has no place in tuberculosis therapy!

As a matter of fact, *injections* of tuberculin in treatment for pulmonary tuberculosis, never widely used when based upon either rationale (stimulation of healing through "focal reactions", *or* desensitization) *have been almost completely discontinued* because the margin of safety between what is a completely harmless (albeit therapeutic?) dose or series of injections, and what is definitely harmful, is too small for this material to be administered except by a very few who have seen fit to devote the time and effort required to master the difficult art of safe administration.

Moreover, those using this form of treatment for pulmonary tuberculosis have not been able to demonstrate sufficiently superior results over other accepted measures to warrant widespread use.

Practical Application of Systemic Rest

The point of *prime* importance to bear in mind in connection with the application of systemic (body) rest for the treatment of practically *every* case of active pulmonary tuberculosis is that to be effective, it must be prescribed and taken in "quantity sufficient" for the purpose. That quantity may be much or little, in or out of bed, in or outside a sanatorium. It may or may not be supplemented by specific medicinal aids, collapse therapy, or excisional surgery.

It is acknowledged that treatment of chronic diseases like tuberculosis should be permitted to interfere as little as possible with everyday physiological and psychological processes, thereby reducing to a minimum complaints which almost invariably arise from time to time from the unnatural but sometimes necessary curtailment of these normal functions. Accordingly, no more systemic rest should be prescribed than is required for the patient to make satisfactory progress over a reasonable period of time. For example, when the clinical course, x-ray, laboratory, and physical findings, as a whole, show good improvement over a 2 to 4 months' period, the physician may decide that the patient no longer will need as much rest to make corresponding improvement during the ensuring 2 to 4 months. Therefore, *less rest* (*not* more exercise) will be prescribed.* Actually it amounts to the same thing, but the latter point of view has the advantage of retaining definitely and unequivocably a single element of constitutional therapy for the *same* disease (in the *same* patient) *throughout its course.* This applies just as much to the patient who has been working and leading an essentially normal life for months or years but who must still take 15 minutes a day of prescribed rest on a couch after lunch to cure or to "control" residual sub-clinically active disease, as it does for the patient who takes 15 hours or 24 hours per diem flat in bed for clinically active tuberculosis of a more acute or refractory character, and to patients who take all gradations of rest in between.

When the attention of everyone concerned is constantly focused upon *rest* as the *only* real component of systemic treatment of clinically and sub-clinically active tuberculosis *from beginning to end,* the patient is far more apt to take enough rest to get well than when the respective roles of "rest" and "exercise" are not clearly and emphatically defined. When in addition rest is not prescribed in excess of good treatment requirements (as determined by the course of the disease) the patient will have also the privilege of enjoying and profiting from *all* the side effects or benefits which admittedly accrue from exercise. Insofar as exercise of mind and body promotes approximation to normal of all psychological and physiological processes (compatible with treatment requirements), complications which sometimes needlessly arise from unnecessarily severe curtailment of these functions can be avoided. In this respect, exercise in and of itself serves a *very* useful purpose. Obviously, it can be a most valuable expediter of treatment, much like good food, fresh air and freedom from indigestion. *Anything* that *any* patient with pulmonary tuberculosis can do or take which is not incompatible with his systemic body rest requirements but which contributes to his morale and/or prevents complications of any kind from arising during course of treatment, should be regarded as a very important though not always essential expediter of treatment and should be incorporated whenever possible into the well balanced treatment program.

*Surgical cases sometimes are encouraged to take *more exercise per se* (*not* less rest) a few weeks preceding surgery. In these instances exercise is not prescribed for the patient's tuberculosis per se (the bed-rest previously taken already having proven inadequate as indicated by the need for surgery). Exercise is prescribed *to improve muscle tone* (of the heart and generally) and temporarily to stimulate or restore *all* physiological processes to a higher level (nearer normal), that the patient may the better withstand the physical impact ("shock") of operation. *Following* surgery, treatment requirements for the underlying tuberculous disease in terms of systemic rest again become paramount and rest is once more prescribed in an amount which *now* is hoped *will* prove to be equal to "quantity sufficient", when added to the benefits of operation.

Woman's Auxiliary . . . .

President—Mrs. Maynard Emlaw, Richmond
President-Elect—Mrs. Mervin W. Glover, Arlington
Recording Secretary—Mrs. J. W. Carney, Newport News
Corresponding Secretary
Mrs. Levi W. Hulley, Jr., Richmond
Treasurer—Mrs. William C. Barr, Richmond
Publication Chairman—Mrs. Wm. S. Grizzard, Petersburg

Richmond.

This Auxiliary has just completed the Fall Drug Drive, under the chairmanship of Mrs. F. E. Oglesby. Thirty members assisted her in the collecting and sorting of these drugs and it was estimated that over $2500 worth of drugs were distributed to Sheltering Arms, Pine Camp, Crippled Children and Home for Incurables.

The Richmond Auxiliary was very proud to see their own Lucia Emlaw installed as President of the Auxiliary to the state society. She went on to St. Louis to the Southern Medical Association meeting and was elected treasurer of that Auxiliary.

At the November meeting, Mrs. Thomas P. Shephard, first woman member of the Richmond City Council, spoke on "Women Face Responsibility".

Anne R. Snead
Publicity Chairman

Wise.

The Auxiliary to the Wise County Medical Society met on November 3rd at the home of Mrs. G. V. Martin, with Mrs. E. Bene as co-hostess. The president, Mrs. W. B. Barton, presided. Mrs. J. H. Dellinger, parliamentarian, gave a resume of parliamentary procedure. A letter from Mrs. K. W. Howard, state president, was read in which she complimented the Auxiliary on its activities. Mrs. H. H. Howze reported on subscriptions to "Today's Health" and suggested promoting the magazine as gifts for Christmas.

I. V. Bene (Mrs. E.)
Chairman of Publication

Arlington.

A benefit dessert-bridge party was held on October 12th at the home of Mrs. Lee B. Martin, the immediate past president of this Auxiliary. A very pleasant social afternoon was enjoyed by the many members as well as their guests.

For several years the auxiliary has been placing subscriptions to "Today's Health" in Arlington school libraries and the Arlington Hospital. This year a subscription will be sent the Arlington Visiting Nurses Association. Through the cooperation of the Arlington Medical Society, subscriptions to this magazine will also be sent to the Health Chairman of each of the Arlington school Parent-Teacher Associations.

Mr. Harry G. Barnes, executive secretary of the Arlington County Medical Society, was guest speaker at the November luncheon of the Auxiliary, his subject being "What the Woman's Auxiliary Means to the Arlington County Medical Society".

The Annual Dinner Dance was held on November 13th and was a grand success, enjoyed by all.

The TB Handicraft Sale, sponsored by the Auxiliary, was held December 3-7 at one of the local banks. All the articles sold are handmade by patients in sanitariums in Virginia as well as by many who are "home-bound". The money is turned over to the individual who made the article.

Helen H. Waters (Mrs. James C.)
Publicity Chairman

Northampton-Accomac.

This Auxiliary met on November 9th with Mrs. W. T. Green, Jr., and Mrs. Thomas B. Hardman, as co-hostesses, in Nassawadox. Mrs. John R. Hamilton, chairman of Today's Health, presided. She stated that every doctor's wife is a power in promoting public relations and another PR medium is "Today's Health" which is a means of offsetting TV and radio sensational and unreliable information. A letter from Dr. S. K. Eskridge told how he and Mrs. Eskridge gave this magazine as Christmas presents because of the tremendous interest in medicine today and its value in public health. Several members expressed their views on "Today's Health" and the articles of special interest to them.

The nominating committee then presented the following slate: president, Mrs. John R. Mapp; vice-president and president-elect, Mrs. Donald Fletcher; secretary, Mrs. Thomas Hardman; and treasurer, Mrs. W. E. Eskridge.

Delicious refreshments were served and a social period followed.

Catherine R. Trower (Mrs. Holland)
Chairman of Publicity

Petersburg.

The Auxiliary met on November 30th at the Petersburg General Hospital with Mrs. Joseph McCormick, president, presiding.

Mrs. Garnett Link introduced Mrs. E. B. Smoot, teacher for the class for mentally retarded children. She spoke about the work she was doing with the class and expressed her appreciation for the money and help the Auxiliary had given. Mrs. Joseph P. Whittet reported on the Halloween party given for these children in October.

Mrs. Francis Wyatt reported as chairman of the Nurse Recruitment Committee. Her recommendations were approved and the Auxiliary plans to give $150 to a deserving senior student at either the Petersburg High School or St. Joseph's High School. The next two years of training $75 a year will be given. The student must enter an approved teaching hospital.

Mrs. John Uzmann
Publicity Chairman

New Books.

The following are among recent books received at the Tompkins-McCaw Library of the Medical College of Virginia. They are available to our readers under usual library rules.

Bailliart—Affections vasculaires de la retine.
Color atlas of pathology.
Courville—Contributions to the study of cerebral anoxia.
Fletcher—Morals and medicine.
Gross—Surgery of infancy and childhood.
Gruenberg, editor—The encyclopedia of child care and guidance.
Horsley—Azeotropic data.
Ingersoll—Neuroanatomy notebook.
Johnson, et al—The kinetic basis of molecular biology.
Josiah Macy—Renal function. 5th conference.
Kaye—Handbook of emergency toxicology.
Kitay and Altschule—The pineal gland.
Low—Mental health through will-training.
Maurer and Vogel—Narcotics and narcotic addiction.
Mourant—The distribution of the human blood groups.
National Research Council—Tumors of the retroperitoneum, mesentery and peritoneum.
Organic syntheses.
Peele—The neuroanatomical basis for clinical neurology.
Race—Blood groups in man.
Reports of the biochemical research foundation of the Franklin Institute.
University of Pennsylvania—Thirty fourth report of the Henry Phipps institute.
Wilson—The microphysical world.
Year book of obstetrics and gynecology.

The following are among the recent books received at the Medical Library of the University of Virginia. Most of them are available to our readers in that section of the state.

Acta obstetrica et gynecologica Scandinavia:
Jedberg—A study on genital tuberculosis in woman.
Timonen—Mitosis in normal endometrium and genital cancer.
Friesen—A study of small dose sulphamerazine prophylaxis in obstetrics.
Vara—On the toxaemias of late pregnancy.
Vara—Paavo-total versus subtotal abdominal hysterectomy.
Vara—Observations on the NaCl content of whole blood, plasma and red blood cells in the late toxemias of pregnancy.
Schjott-Rivers—Can the results of irradiation in cancer of the uterine cervix be improved by prophylactic hysterectomy?
Banyai—Nontuberculous diseases of the chest.
Boyd—A textbook of pathology.
Cash—The mind of the South.
Ciba Foundation—Preservation and transplantation of normal tissues.
Clinical Orthopedics.
Conference on renal function, Transactions.
Dubose—Biochemical determinants of microbial diseases.
Eycleshmyer—A cross-section anatomy.
Fine—The bacterial factor in traumatic shock.
Fletcher—Morals and medicine.
Hawk—Practical physiological chemistry.
Kitay—The pineal gland.
Kleiner—Human biochemistry.
Kleiner—Laboratory instructions in biochemistry.
Means—Lectures on the thyroid.
Najjar—Fat metabolism.
Nelson—Mitchell-Nelson text book of pediatrics.
Sebrell—The vitamins: chemistry, physiology, pathology.
Simmons—Social science in medicine.
Willmer—Tissue culture.
Wolff—The anatomy of the eye and orbit.
Yale law journal—American Medical Association: power, purpose and politics in organized medicine.

President's Message . . . .

IN THIS first issue of the Virginia Medical Monthly for 1955 we send to you our best wishes for a happy and prosperous New Year. Many changes have been made in our mode of life during the past few years, but our goal should remain the same to give kind and expert service to our patients.

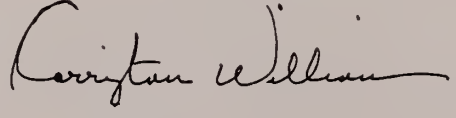
The most fundamental change in our society is the elimination of the word "white" from our constitution so that members of all races are now eligible for membership. The vote on this important issue was close so that we should recognize the fact that there is still a very considerable opposition to the new order. We should recognize it, however, to be the will of the Society and I will use my best efforts to make it work to the advantage of all concerned.

We are aware of the social changes of the times. They are inevitable, but to be successful they cannot be hurried. Our people have passed through much more trying and difficult problems in the past, and if the healing power of them can be allowed to act, we will have no trouble now. It is of the greatest importance that we have harmony in the Society. To accomplish this the old and the new members must use self-control and tact. The local societies are self-governing and must decide their own courses, but in The Medical Society of Virginia all members of the local societies are eligible. It is my earnest hope that every member of the State Society who was opposed will forget his opposition and continue to use his influence for the good of the whole group.

Our new members must recognize the changing order and must so conduct themselves as to avoid points of friction, and to avoid antagonisms which cannot be eliminated immediately. I am sure that it would be bad policy for the old members to set up a club to exclude the new members from the social functions of the Society, at the same time the new members should restrain themselves from demanding participation in these events both on the local and state levels. Both sides should use restraint in their attitudes and should not allow outside influences to push them into conflict. If they will do this and allow the leveling influence of time to act, all will be well.

I would like also to urge you individually to recognize the value of the American Medical Education Foundation. Our members have not contributed to this fund with generosity. Many do not understand how this Foundation is set up and how it works. I would urge all of you to become interested in it, to inform yourself of its work and to contribute to it as adequately as you can. Several state societies have made annual assessments on its members, but I think it should be on a purely voluntary basis in Virginia. I hope all of you will give it your serious consideration.

Finally, I thank all of you who are giving of your time and effort to the work of the Society. It is a busy and successful organization as a result of this cooperation. We look forward to a good year in 1955.



President

Editorial . . . .

Control of Tuberculosis in Virginia

THERE is apparently, an impression that the problem of tuberculosis is one that has been largely solved, and it is now possible to turn our attention to other matters. Nothing could be further from the truth. Great advances have been made, but tuberculosis is still the first cause of death in certain age groups.

For the first time in history, drugs effective against tuberculosis are available. To withhold these drugs from a patient with active disease (in the hope that nature may cure him) would be as unthinkable as to withhold effective drugs in malaria or syphilis. The remarkable success of the various antituberculosis drugs has given rise to a number of new problems. One of the most acute problems encountered nowadays by the sanatoria is the reluctance of patients to remain in the institutions sufficiently long to guarantee permanent recovery from tuberculosis. The patient who leaves the sanatorium against medical advice is a menace to himself and others, because interruption of treatment increases the chance of recurrence, results in longer duration of illness, higher mortality and produces drug resistant organisms.

Too much publicity is being given to statements that many patients do not need sanatorium care. Such statements issued to lay audiences are likely to make it increasingly difficult to persuade anyone to go to a sanatorium or to keep him there after he arrives.

It is necessary for the physician to guard against the demands and cajolery of the patient who wishes to remain at home rather than go to the sanatorium. If the patient has a positive sputum, it means that he has ulcerative disease even though a cavity may not be visible in the x-ray. Expert care of the trained and experienced physicians in tuberculosis sanatoria is necessary to guide the patient from the first diagnosis to the status of inactive disease and to an apparent or complete cure. The use and selection of drugs and other therapeutic measures, and the proper timing of each, is based on wide knowledge and experience. The early use of drugs at home without a definite diagnosis and without a positive sputum may hopelessly confuse the case. Haphazard administration of drugs may also produce unsatisfactory results.

Home care with frequent visits to clinics seems to be successful in large urban areas where the patient can pay a visit at a cost of relatively little time and effort, and perhaps fifteen to thirty cents for bus or subway fare. In rural areas where expert opinion is not available and where laboratories and x-rays are not up to high standards, such a program might be extremely difficult to administer.

The proposed regional clinics may be able to take the place of the large urban clinics; however, even these may fail to control tuberculosis unless we can find some means to control the patient with a positive sputum and keep him in the sanatorium as long as necessary. It must be recognized that the antituberculosis drugs may rather speedily convert the sputum from positive to negative, but when the drugs are discontinued prematurely, tubercle bacilli may again appear in the sputum, and the disease may no longer react favorably to treatment.

When a diagnosis of tuberculosis is made or suspected, most patients need help in facing the problem. This help is best rendered in a sanatorium. There the services of trained medical-social workers are available as well as workers in rehabilitation, education and other fields which may have a vital effect on the patient when his disease becomes arrested through sanatorium care.

E. C. Drash

Dr. Drash is Chief of Thoxacic Surgery and Professor of Clinical Surgery at the University of Virginia Hospital, Charlottesville.

Society Proceedings . . . .

Richmond Academy of Medicine.

The annual meeting and Christmas Party of the Academy was held on December 14th. Dr. R. D. Butterworth succeeded to the presidency and the following officers were elected: president-elect, Dr. W. L. Ball; first vice-president, Dr. Elam C. Toone, Jr.; second vice-president, Dr. Weir M. Tucker. Dr. Benjamin Rawles, Jr., retiring president, is chairman of the Board, with Drs. W. L. Ball, Butterworth, of the Board, with Drs. Ball, Butterworth, Toone, and M. M. Pinckney as the other members.

The Fourth District Medical Society

Met on December 14th at the Petersburg General Hospital, with the president, Dr. A. Tyree Finch, Farmville, presiding. A symposium on Cardio-vascular Surgery was presented by Drs. Reno R. Porter and Lewis H. Bosher, Jr., of the Medical College of Virginia, Richmond.

Following the business and scientific meeting, a cocktail party and dinner was held at the Hotel Petersburg.

The Medical Society of Northern Virginia

Held its meeting on December 14th in Strasburg, under the presidency of Dr. E. L. Grubbs of Front Royal. Following the business session, Dr. W. Smoot Carter spoke on "Modern Conception of Ringworm of the Scalp" and Dr. H. P. Maccubbin on "Renal Tuberculosis". Both are from Winchester.

Following a luncheon at the Strasburg Hotel, Drs. George Cooper, Jr., and George R. Minor of the University of Virginia, Charlottesville, spoke on "The Diagnosis of Lung Cancer".

Lynchburg Academy of Medicine.

At the November meeting of the Academy, held on the 8th, Dr. Lewis G. Richards spoke on "Immediate and Early Reaction to Surgery".

There was no meeting of the Academy in December.

Roanoke Academy of Medicine.

The December meeting of the Academy was held on the 6th under the presidency of Dr. Allen Barker. Dr. Homer Sieber spoke on "Newer Drugs in the Treatment of Hypertension" and Dr. James Snead on "The Use of Some Radioactive Isotopes in Medicine".

Norfolk County Medical Society.

At the November 15th meeting of this Society, Dr. J. R. Heller, Director of the National Cancer Institute, National Institutes of Health, Bethesda, Maryland, spoke on Progress in Cancer Research.

Dr. Charles J. Devine is president of this Society.

News . . . .

CALENDAR OF COMING EVENTS

American Laryngological, Rhinological and Otological Society—Southern Section, University of Virginia, Charlottesville, January 22

Annual Congress on Industrial Health—Hotel Shoreham, Washington, D. C., January 25-26

Annual Congress on Medical Education and Licensure—Palmer House, Chicago, February 5-8

Tri-State Medical Association—Hotel Chamberlin, Old Point, Va., February 21-22

National Conference on Rural Health—Schroeder Hotel, Milwaukee, Wis., February 24-26

International Academy of Proctology—The Plaza Hotel, New York City, March 23-26

Eastern States Education Conferences—New York Academy of Medicine, New York City, April 21-22

Virginia Society of Pathology.

At the annual meeting, held in Washington on November 2nd, the following officers were elected: President, Dr. Edward Levy, Norfolk; president-elect, Dr. John Hooker, Danville; secretary-treasurer, Dr. George J. Carroll, Suffolk; councilor, Dr. William D. Dolan, Arlington; and councilor-elect; Dr. Carroll.

The following resolution adopted by the Society several years ago, was again brought to the attention of the members and its was recommended that it be published in the Monthly:

The Virginia Society for Pathology at their recent meeting reiterated their policy relative to the performance of free laboratory service to indigent patients. It is felt that this resolution should be brought to the attention of the members of the State Medical Association.

WHEREAS, the practice of pathology is a specialty branch of medical practice;

WHEREAS, the practice of Pathology is governed by the same principles of medical ethics that govern other branches of medical practice;

WHEREAS, the American Medical Association and the American Society of Clinical Pathologists are in agreement on these same principles;

THEREFORE BE IT RESOLVED THAT: The Virginia Society for Pathology go on record as performing free laboratory service when necessary by its membership to indigent patients.

Petersburg Doctors Honored.

Drs. Charles S. Dodd, Elisha L. McGill, Joseph Dunn Osborne, and John Mason Williams were honored at the annual banquet of the Petersburg Medical Faculty on December 7th. They were presented with gifts in recognition of many years devotion to medicine. All of these doctors have practiced medicine for fifty years or more and are Life Members of The Medical Society of Virginia.

McDowell Marker Moved.

The marker on Dr. Ephraim McDowell, erected by The Medical Society of Virginia in 1929, has been relocated and is now on Highway #11, one mile south of Fairfield. This was occasioned by the new location of the highway which left the marker in an obscure place. The cost of the change was born by The Medical Society of Virginia.

Tri-State Medical Association.

The annual meeting of this Association will be held at the Chamberlin Hotel, Old Point Comfort, February 21st and 22nd, under the presidency of Dr. Fred Kredal of Charleston, S. C. Dr. Paul Camp, Richmond, is president-elect and chairman of the program committee, and Dr. R. B. Davis, Greensboro, N. C., is secretary-treasurer.

The complete program of this meeting will be found on advertising page 50 of this issue of the Monthly.

Dr. James J. Moriarty,

President of the Alexandria Civitan Club, was recently named chairman of a committee to consider club participation in the Alexandria children's recreation park movement.

Dr. E. B. Mewborne,

Newport News, recently took part in a panel discussion conducted by the Peninsula Christian Ministers Association on "Common Problems of Ministers and Physicians".

Johnston-Willis Residents and Interns.

Dr. Philip R. Allison, one of England's outstanding chest surgeons, delivered the annual A. Murat Willis oration on November 26th, climaxing the annual meeting of staff members and former residents and interns of Johnston-Willis Hospital, Richmond. Dr. Allison spoke on Diaphragmatic Hernias.

During the days activities, papers were presented by Drs. Randolph Graham, William A. Johns and Thomas Johns, all of Richmond, and Walter Daniels of Charlotte.

A portrait of the late Dr. M. Pierce Rucker was unveiled in the Library of the Hospital. He was a director of Johnston-Willis Hospital and former chairman of the Richmond Board of Health. During this ceremony, Dr. Bayard Carter, Duke University, called Dr. Rucker a "pharos" (lighthouse) for obstetricians.

Dr. Harvey B. Haag,

Richmond, was elected president of the American Therapeutic Society at its annual meeting held in St. Louis in November. He is professor of pharmacology at the Medical College of Virginia.

The American Laryngological, Rhinological and Otological Society,

Southern Section, will meet in Charlottesville at the University of Virginia Medical School on January 22nd, under the chairmanship of Dr. G. S. Fitz-Hugh, Charlottesville. The scientific program will begin at 9:00 A.M., and is as follows: Introduction of the President—Dr. Kenneth M. Day, Pittsburgh, Pa.; Acute Thyroiditis—Dr. Francis H. McGovern, Danville; The Recognition and Manage-

ment of Vocal Abnormalities—Dr. George B. Ferguson, Durham, N. C.; Dermatologic Lesions of Interest to the Otolaryngologist—Dr. Edward P. Cawley, University; Traumatic Tracheal Atresia—Dr. Richard W. Hanckel, Charleston, S. C.; Lymphoblastoma in Otolaryngology—Dr. Delmar F. Weaver, Detroit, Mich.; and Headaches, Sinusitis, and Mother Goose—Dr. James T. King, Atlanta, Ga.

Dr. David C. Wilson,

University of Virginia, was a member of a 33-man panel of experts who reported at the first graduate symposium on geriatric medicine ever held in this country. He spoke at the two day meeting in New York on the latest studies of how emotional attitudes hasten or retard the aging process.

Dr. Margaret Glendy

Has been appointed chairman of the blood program of the Roanoke County chapter of the American Red Cross.

Dr. Robert A. Hoffman,

Richmond, was recently elected a Fellow of the American Academy of Pediatrics at its meeting in Evanston, Ill.

The American Orthopsychiatric Association

Will hold its 32nd Annual Meeting at the Hotel Sherman, Chicago, February 28-March 2. Approximately 100 scientific papers will be presented. There will be all-day sections on Childhood Schizophrenia, Child Development and Psychotherapy with Children. Visual material of specific use in mental health education and twelve work-shops are planned as part of the program.

Inquiries about the program, reservations, exhibits and other matters should be addressed to Dr. Marion F. Langer, 1790 Broadway, New York 19, N. Y.

Dr. J. N. Rose

Has been named as Health Director of Lee-Scott Health District, to be effective January 3, 1955.

Clinical Conference.

The third annual Clinical Conferences of the Louise Obici Memorial Hospital, Suffolk, will be held on January 19th. All interested physicians are invited to attend.

The scientific program will begin at 10:30 A.M. and will continue through a social hour and dinner at 6:00 P.M. The program is as follows—Oral Manifestations of Endocrine Dysfunction and Certain Metabolic Bone Diseases by Dr. Harold M. Syrop, Medical College of Virginia; Interpretation of Physical Findings in Chest Diseases by Dr. Louis A. M. Krause, University of Maryland School of Medicine, Baltimore; Role of the Practitioner in the Management of Asthma by Dr. Oscar Swineford, Jr., University of Virginia. The afternoon session will be a panel discussion on Medical and Surgical Diseases of the Lung with Dr. Sol Katz, Washington, D. C., as moderator. Surgery will be discussed by Dr. Brian Blades, The George Washington University, Washington; Medicine by Dr. Dean B. Cole, Medical College of Virginia; and Radiology by Dr. Roy R. Greening, U. S. Naval Hospital, Portsmouth.

Dr. Walter B. Martin, President of the American Medical Association, will speak on Organized Medicine, the Doctor and the Public, following the dinner.

Dr. T. L. Allman

Will be Health Director of Fauquier-Prince William-Rappahannock Health District, effective January 3, 1955.

Wanted.

A Physician for contract practice in coal camp. Write #30, care Virginia Medical Monthly, Box 5085, Richmond 20. Va. (*Adv.*)

Secretary-Office Administrator,

Desires position. Four years in charge of psychiatrist's office. Address "Secretary", care the Monthly, Box 5085, Richmond 20, Va. (*Adv.*)

Position Open.

Psychiatrist as Director of St. Albans Out-Patient Clinic and Director of Mountain Empire Guidance Clinic, Radford, Va. Requirements—3 years approved training. Salary—$12,000 per annum, with opportunity for advancement. For further details, address Dr. James P. King, St. Albans Sanatorium, Radford, Va. (*Adv.*)

Physician Wanted

For community of 1100 in central Virginia. Apply for information to #35, care the Monthly, Box 5085, Richmond 20, Va. (*Adv.*)

Obituaries . . . .

Dr. William Johnson West,

Chief surgeon for the State Penal Farms in Goochland and Powhatan Counties for the past twenty-two years, died at his home at State Farm on November 22nd. He was eighty-three years of age and graduated from the former University College of Medicine, Richmond, in 1893. Dr. West practiced in Richmond before going to State Farm. He was diagnostician for the City Board of Health and surgeon for the C. & O. Railway Company. He had been a member of The Medical Society of Virginia since 1904 and was made a Life Member in 1948. His wife and a daughter survive him.

Dr. Thomas Duckett Jones,

Outstanding authority on rheumatic fever, died November 22nd at the age of fifty-six. He was vice-president and medical director of the Helen Hay Whitney Foundation of New York. Dr. Jones was a graduate in medicine from the University of Virginia in 1923. He was formerly a member of The Medical Society of Virginia. He was a native of Petersburg and a son of the late Dr. J. Bolling Jones. A brother is Dr. Herbert C. Jones, Petersburg, and a sister, Dr. Jean Jones Perdue, Miami Beach, Fla. Two other brothers and three sisters survive him.

An Appreciation of Dr. Powell.

With the death of William Leven Powell, the citizens of Roanoke have lost a good friend, a delightful companion and an able physician. His good judgment and ability have been recognized in the State Society also, resulting in his election as president in 1948.

Born in Winchester, August 31, 1876, he graduated from the University of Virginia in 1900. Following his internship at the Philadelphia Polyclinic Hospital, he became resident physician at St. Ann's Infant Asylum and Maternal Hospital in Cleveland, Ohio. Following this varied experience, he came to Roanoke in 1905.

After two years as physician and superintendent of the Roanoke Hospital, he located in Roanoke for private practice. At this time, he married Miss Nellie Kerr, of Philadelphia, who had also been superintendent of nurses at the Roanoke Hospital.

From winning the All Around Gymnastic Medal at the University of Virginia in 1900 through the above hospital experiences to 1908, he practiced continuously in Roanoke for forty-six years, to a few hours before his death, on October 22, 1954.

In World War I, he was a captain in the Medical Corps; in World War II, he was assignment and procurement officer, sixth congressional district and Appeal Board III.

For twenty-three years, he was Director of the outpatient department of the Roanoke Hospital. In this period, he was surgeon for the Norfolk & Western Railway, the Appalachian Electric Power Company and the Safety Motor Transit Corporation. As chairman of the Board of Directors of Blue Shield for three years after its organization, he took a leading part in carrying this organization through a critical period.

Dr. Powell served on the Council of The Medical Society of Virginia for two terms before becoming its president in 1946. His other activities were, member of the American Academy of Proctology, Board of Roanoke Guidance Center and a member of Steering Committee of the State Hospital Advisory Council.

He was the first president of the Virginia Academy of General Practice.

Dr. Powell was an active member of the Second Presbyterian Church and had served as an elder and deacon.

Last but not least is the host of friends and patients, in all walks of life, who mourn his loss.

He is survived by his wife, Nellie K. Powell and a son John Randolph Powell and two grand-children.

W. W. S. Butler
W. H. Saunders
F. A. Farmer

Resolution on Dr. Williams.

It has been said that in death we are all equal. Yet occasionally there is one in our ranks whose stature in life overshadows the rest of the company, and whose passing merits more than our usual courtesies; such a physician was Dr. John Powell Williams. Those who knew him well had come to consider him invincible. Therefore, his early death on the first of September, 1954 came as a distinct shock to his close friends and many associates. With characteristic determination, Dr. Williams had continued at his desk until just a few weeks before the end. At the last he stoically faced the inevitable with equanimity, never admitting defeat.

Dr. Williams was born in 1894 in Richmond, Virginia into a large family long prominent in Virginia's cultural and civic affairs. . . . . .

. . . . . His studies were interrupted in 1916 by a period of active military service with the Richmond Light Infantry Blues on the Mexican border. He soon became a lance corporal in the 1st Virginia Cavalry under General Pershing. This was only the beginning of a long and distinguished military career. Although he was eventually able to resume his studies, the outbreak of the first World War again found him in uniform as an officer with the 80th Division, 314th Field Artillery in France. The Armistice in 1918 made it possible for him to complete his studies and he received the degree of bachelor of arts and doctor of medicine from the University of Virginia in Charlottesville. Then followed a two-year internship at St. Luke's Hospital in New York City, after which he returned to Richmond in 1925 and joined the staff of the McGuire Clinic.

Thus began a 15 year period of outstanding service as a civilian physician. In the interval between the two World Wars Dr. Williams soon found himself occupied by a large medical practice. He became an exceedingly popular clinical professor at the Medical College of Virginia and gained a reputation for being a keen diagnostician. In 1940 this Academy elected him to the office of president. . . . . .

Were I to stop the chronicle of his life at this point, it would be more than many of us could hope to aspire. However, this was just the beginning of his accomplishments.

When Dr. Carrington Williams, who had revived old Base Hospital 45 as the 45th General Hospital, was disqualified for active service in World War II because of physical disability, Powell took over the post of Unit Director from his kinsman. He accompanied the Unit to Africa and Italy. Dr. Powell Williams' leadership and dynamic personality as Chief of the Medical Service are acknowledged by all former members of that organization to be the guiding factor in the success of the outfit. For his work, Colonel Williams was decorated with the Order of the Legion of Merit and the Organization was awarded a citation for outstanding service.

It is not generally known that in the anticipation of being called to active duty Powell had a mild inguinal hernia surgically repaired so that there would be no question of his ability to enter service. Although he had already served with distinction in two wars, and could have elected to remain in civilian life to attend to a flourishing practice and a large teaching responsibility without compromising his honor, it was characteristic of him to choose the part of a soldier. . . . . .

We have recalled him thus far as an outstanding civilian and military figure, but actually, by his own confession, the proudest accomplishment of his life was the instruction of young physicians. Few of us realize that the word "doctor" in its original sense means "teacher" but to Powell the first Hyppocratic precept, "I will teach my brother and the sons of my brother this art," was to him the most important part of his obligation to medicine. With his wide scholarship and broad humanity, he had few peers in this respect.

. . . . . At the time of his death Dr. Williams was a fellow of the American Medical Association, Medical Society of Virginia, the Richmond Academy of Medicine, and the American College of Physicians. He was State Chairman of the Medical Committee for Civil Defense, and Chairman of the Physicians' Advisory Committee for Selective Service. He was the counselor of the Constantinian Society (a medical group composed of former medical officers who had served in the Mediterranean Theater of Operations—a society which he had helped to found and of which he had been past president). But to merely list his honors, is to give no true picture of the man that most of us knew. A courtly sensitive and punctilious gentleman of the old Virginia school, he was fired by a tremendous energy and enthusiasm which inspired all young physicians who came in contact with him to a greater devotion to the practice of medicine in its highest sense. Inflexible loyalty to ethical principles regulated every course of action in his private and professional life. Rigorous intellectual honesty penetrated his understanding of himself and others. Completely lacking in material ambition, he was always approachable, responsive, generous and helpful. Yet Powell was no mere paragon of saintly virtue. He was rated high as a good companion by all who knew him.

As an intense patriot, as a courageous soldier, as an outstanding medical officer, as a beloved civilian physician, and as an honored teacher there has seldom been an equal in this Society. Finally, as an esteemed and wise counselor, a delightful companion and a loyal friend there is no replacement for this man.

BE IT RESOLVED, THEREFORE, that these facts and sentiments be recorded in the minutes of this Society, and a copy be forwarded to his widow, and son, with our deep sympathy in their bereavement.

JAMES B. FUNKHOUSER, M.D.
KINLOCH NELSON, M.D.
HENRY ST. GEORGE TUCKER, M.D.

Dr. Dudley.

In its regular meeting on November 12, 1954, the Medical Staff of the Martinsville General Hospital passed unanimously the following resolution:

WHEREAS, we are aware of a great loss in our Chief of Staff, Dr. W. Brown Dudley, of Martinsville, Virginia; and,

WHEREAS, as a father and husband, Dr. Dudley was head of one of the most respected families in Martinsville; and,

WHEREAS, in his service to his church he was a leader in the moral development of his community; and,

WHEREAS, as first a physician and surgeon and secondly as a specialist in ear, eye, nose and throat conditions, he was admired and respected by his patients and colleagues alike; and,

WHEREAS, in his passing, not alone have we and his family suffered immeasurable loss, but also his community,

THEREFORE, BE IT RESOLVED, that tribute be made and recorded in the official minutes of the Medical Staff of the Martinsville General Hospital; and

BE IT FURTHER RESOLVED, that a copy of this resolution be transmitted to Mrs. Dudley and her children as an expression of our sincere sympathy and heartfelt condolence; and

BE IT FURTHER RESOLVED, that a copy of this resolution be transmitted to the Martinsville Daily Bulletin and a copy transmitted to the Virginia Medical Monthly.

FRANCIS B. TEAGUE
WILLIAM D. LEWIS
T. H. DICKERSON

Dr. Wright.

The passing of Dr. George A. Wright at his hospital in Marion, Virginia, on October 28, 1954, brought to a close the brilliant career of an outstanding Virginian, an able surgeon, and a loved and devoted public servant.

The rise of Dr. Wright in the field of medicine and surgery bespeaks his outstanding medical qualifications and surgical fitness, and his host of friends is a testimonial of the love and esteem in which he was held by the members of the medical associations and the people of Virginia generally.

Dr. Wright was devoted to his family, a lover of his fellow man, and was noted for his courtesy to the members of the medical association, and more particularly for his consideration, kindness and courtesy to his patients. He was modest and temperate in his daily life. He disapproved public acclaim and approached his work in a sense of duty to be performed without fanfare or ostentation. The exemplifications of such traits as these served him well and endeared him in the memory and hearts of all those who knew him.

His death leaves void a place in the public life of Southwestern Virginia which will be difficult to fill.

His success as a physician, outstanding surgeon and organizer as well as an active worker in the Democratic Party and a civic leader will long be remembered.

"To know him was to love him"

And in recognition of the debt of all, to this beloved and esteemed member of The Medical Society of Virginia, the Smyth County Medical Society, and the Lee Memorial Hospital:

BE IT RESOLVED, that these associations and the staff of the Lee Memorial Hospital, do hereby express their deep regret in the great loss to them, the medical associations of the state and the people of this state in the passing of Dr. George A. Wright:

That a copy of this resolution be presented to Sara Louise Wright, his widow, and Warren Wright and William T. Wright, his sons, with sincere sympathy of all these members of The Medical Society of Virginia, the Smyth County Medical Society and the Lee Memorial Hospital:

That a copy be spread upon the minutes of the Smyth County Medical Society, the Lee Memorial Hospital and that it be published in the monthly journal of The Medical Society of Virginia.

D. C. BOATWRIGHT, M.D., *Chairman*

Dr. Carr.

Dr. George Hopkins Carr., Sr., was born in Portsmouth, Virginia, May 8, 1875. He was a graduate of the medical department of the University of Maryland of the class of 1896. He began general partice in his home city and in a short time built up a large and lucrative practice which he retained until four years ago when, on account of failing health, he was forced to curtail his activities. He died suddenly on October 10, 1954. He was the Dean of the medical profession of Portsmouth. He was one of the oldest members of the Norfolk County Medical Society. At the meeting of The Medical Society of Virginia on October 8, 1948, he was made a member of the Fifty-Year-Club which membership he prized most highly. He was also a member of the American Medical Association.

Dr. Carr was a gentleman of the "old school", the soul of honor and was always courteous and considerate of others. He was fearless in his defense of what he considered to be right, never compromising with what he believed to be wrong. He will be greatly missed by his patients and friends who are legion.

BE IT THEREFORE RESOLVED that the Norfolk County Medical Society hereby expresses its sorrow and regret at the passing of Dr. Carr.

BE IT FURTHER RESOLVED that this resolution be entered in the minutes of the Norfolk County Medical Society and a copy sent to Mrs. Lucille Carr, his loyal and devoted wife who survives him, and also a copy to be sent to the Virginia Medical Monthly for publication.

JOSEPH D. COLLINS, M.D.
KALFORD W. HOWARD, M.D.
T. ELMORE JONES, M.D.

Dr. Senter.

WHEREAS, the Roanoke Academy of Medicine has learned with profound sorrow of the death of its member, Dr. Eugene William Senter, of Salem, on September 20th, 1954, and,

WHEREAS, Dr. Senter was a member of the Academy for many years and was prominent in the professional, business and political life of Roanoke County,

THEREFORE BE IT RESOLVED, that the Academy hereby records its regret at the loss of Dr. Senter, and

BE IT FURTHER RESOLVED, that copies of this resolution be transmitted to his family and to the Virginia Medical Monthly.

ESTHER C. BROWN
ROBERT E. PAINE, JR.
SHELDON D. CAREY, *Chairman*

Dr. McAlpine.

The Norfolk County Medical Society records with deep sorrow the death of one of its most beloved members, Dr. Louis A. McAlpine.

Born in Richmond, February 24, 1894, he was educated in the public schools and graduated from the Medical College of Virginia, June 1916. He served his internship at Retreat for Sick in Richmond.

He interrupted his practice in Portsmouth in 1917 to serve his country in World War I. He served as an officer in the Medical Corps of the U. S. Navy from 1917 to 1921.

He returned to private practice in Portsmouth and remained until illness retired him. During these years he was eminently successful in attaining the height of his profession. He rendered his clientele a highly scientific service and held their confidence and affection. Throughout his busy professional career, he exemplified those characteristics which endeared him to his patients and professional associates, also finding time to assist in the progress of civic and medical movements.

He was the principle figure in bringing about the successful completion of Maryview Hospital and was its first Chief of Staff.

He held membership in the Norfolk County Medical Society, Medical Society of Virginia, American Medical Association, Southeastern Surgical Congress, Fellow American College of Surgery and Seaboard Lodge No. 56 AF and AM.

Dr. Louis A. McAlpine will be missed by his professional and non-professional friends, but his gracious memory will remain.

C. F. WARD
WM. A. BROWN, JR.
GEO. H. CARR, JR.

Dr. Brown.

WHEREAS God, in His infinite wisdom, has called to his eternal reward George Woodford Brown in the

eighty-fifth year of his life on the eighth of October nineteen hundred and fifty-four, and

WHEREAS the members of the Williamsburg-James City County Medical Society mourn the passing of their colleague, the senior member of the Society and a distinguished citizen of our community, therefore

BE IT RESOLVED that the Society has lost an honored member, a Diplomate of the American Board of Psychiatry and Neurology, who, following graduation from the College of Physicians and Surgeons of Baltimore in 1893, graduate study at the University of Virginia, internship at the Baltimore City Hospital, and general practice in Tom's Brook and Saluda, came to Eastern State Hospital in 1911 to serve as superintendent for thirty-two years until his retirement in 1943.

BE IT REMEMBERED that during his tenure significant advances in phychiatric therapy were introduced into our local state hospital, and the first buildings for patient care were erected on the Dunbar tract in its development as the future site of the hospital, and

BE IT REMEMBERED ALSO his service as a member of he Governor's Advisory Board on Mental Hospitals, as a lecturer in neuro-psychiatry at the Medical College of Virginia and in clinical psychology at the College of William and Mary, and as a member of the Virginia Medical Advisory Board during World Wars I and II.

AND BE IT RESOLVED that these resolutions be sent to his bereaved daughters as an expression of deep respect and abiding sympathy in their loss,

AND FURTHER that on this day the tenth of November nineteen hundred and fifty-four these resolutions be spread on the minutes of the Williamsburg-James City County Medical Society, and a copy be forwarded to the Virginia Medical Monthly.

BEN T. PAINTER, M.D.
BAXTER I. BELL, M.D.
CARLTON J. CASEY, M.D.

Dr. Miller.

Dr. E. C. L. Miller was born at Pelham, Massachusetts, in 1867 and died at San Diego, California, July 21, 1954. The vastness of distance and time adumbrates the stature of the man.

Graduating in the same class at the University of Michigan, he and his wife received their M.D. degrees in 1894. Together the two served as medical missionaries in India for a period of five years. After returning to his native land, Dr. Miller was associated with the research staff of Parke, Davis & Company for ten years.

In 1911 he was called by the Medical College of Virginia to the chair of bacteriology. He carried out his assignment with distinction, strengthening the department both in its scientific and teaching aspects.

At that time the college lacked a separate department of biochemistry. The college did not have to look far afield for a founder of this department, now rapidly growing in importance. In 1913 he established the department and for a number of years was professor of biochemistry. The present status of the department attests his brilliance as chemist and his competence as administrator.

A few years later he was elected acting dean of the medical school. This office he filled for a term of one year.

About this time it came to be realized that the Medical College Library was inadequate. The books were few in number and the library methods out-dated. At this juncture, Dr. Miller was appointed librarian. He met this challenge with enthusiasm. Laboring long hours day after day, night after night, he inspired his staff and soon the college had a first class library.

During this period he helped found the Virginia Academy of Science, acted for twenty-six years as its secretary and helped edit its publications.

Though past his physical prime, his scholastic energy seemed to have no limit. In addition to his library duties he found time to assist in the revision of Dorland's Medical Dictionary.

Dr. Miller was an accomplished linguist. Many a physician found him an able translator of any and all foreign medical articles. When he had passed his seventieth birthday, great quantities of Russian medical literature were coming into the library. There was no one available to translate this. By great effort he taught himself this difficult language. No incident in his career is more characteristic of the man. Here was a challenge; no one to meet it, and so he filled the gap.

In the long history of the Richmond Academy of Medicine, of which he was an associate member, was there such an unique figure. The clinical aspects of medicine did not appeal to his mind which needed broader vistas. He sought the fundamental laws of nature. He wanted to know why mankind became sick and how mankind became well. His field was the cosmos. His erudition was heightened by his modesty, hidden hy his shyness.

Physician, scientist, academician, scholar, he sought not the goods of the world but, like Ulysses, strove

"To follow knowledge like a sinking star,
Beyond the utmost bound of human thought."

THEREFORE BE IT RESOLVED, that these resolutions be spread upon the minutes of the Richmond Academy of Medicine and that a copy be sent to the Virginia Medical Monthly.

JOHN D. CALL
WYNDHAM B. BLANTON
EMANUEL U. WALLERSTEIN, *Chairman*

Correction.

In the December issue of the Monthly, the name of Dr. Paul Williamson Howle was incorrectly spelled as "Howell".

Dramamine's® Effect in Vertigo

Dramamine has become accepted in the control of a variety of clinical conditions characterized by vertigo and is recognized as a standard for the management of motion sickness.

Vertigo, according to Swartout, is primarily due* to a disturbance of those organs of the body that are responsible for body balance. When the posture of the head is changed, the gelatinous substance in the semi-circular canals begins to flow. This flow initiates neural impulses which are transmitted to the vestibular nuclei. From this point impulses are sent to different parts of the body to cause the symptom complex of vertigo.

Some impulses reach the eye muscles and cause nystagmus; some reach the cerebellum and skeletal muscles and righting of the head results; others activate the emetic center to result in nausea, while still others reach the cerebrum making the person aware of his disturbed equilibrium. *Vertigo may be caused by a disease or abnormal stimuli of any of these tissues involved in the transmission of the vertigo impulse, including the cerebellum and the end organs.*

A possible explanation of Dramamine's action is that it depresses the overstimulated labyrinthine structure of the inner ear. Depression, therefore, takes place at the point at which these impulses, causing vertigo, nausea and similar disturbances, originate. Some investigators have suggested that Dramamine may have an additional sedative effect on the central nervous system.

Repeated clinical studies have established Dramamine as valuable in the control of the symptoms of Ménière's syndrome, the nausea and vomiting of pregnancy, radiation sickness, hypertension vertigo, the vertigo of fenestration procedures, labyrinthitis and vestibular dysfunction associated with antibiotic therapy, as well as in motion sickness.

Any of these conditions in which Dramamine is effective may be classed as "disease or abnormal stimuli"* of the tissues including the end organs (gastrointestinal tract, eyes) and their nerve pathways to the labyrinth.

Dramamine (brand of dimenhydrinate) is supplied in tablets of 50 mg. and liquid (12.5 mg. in each 4 cc.). It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.



The site of Dramamine's action is probably in the labyrinthine structure.

*Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.



Specializing in the Treatment of Alcoholism

THE KEELEY INSTITUTE

447 W. WASHINGTON ST. PHONE 2-4413

GREENSBORO, N. C.

REGISTERED WITH THE COUNCIL ON EDUCATION AND HOSPITALS OF AMERICAN MEDICAL ASSOCIATION.
MEMBER AMERICAN HOSPITAL ASSOCIATION. MEMBER NORTH CAROLINA HOSPITAL ASSOCIATION.



ELECTRON PHOTOMICROGRAPH

Salmonella paratyphi B 32,000 X

Salmonella paratyphi B (Salmonella schottmuelleri) is a

Gram-negative organism which causes

food poisoning • chronic enteritis • septicemia.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U. S. PAT. OFF.

Medical College of Virginia

HOSPITAL DIVISION

RICHMOND, VIRGINIA

A health center using the latest methods of diagnosis and treatment of disease.

MEDICAL COLLEGE OF VIRGINIA HOSPITAL
OUT-PATIENT DEPARTMENT
SAINT PHILIP HOSPITAL
DOOLEY HOSPITAL

The patient's welfare is our primary interest.

C. P. CARDWELL, JR., *Director*

The . . . Thompson Homestead School

FOR EXCEPTIONAL CHILDREN

Year round private home and school for infants, children and adults on pleasant 250 acre farm near Charlottesville.

Write for booklet.

MRS. J. BASCOM THOMPSON, *Principal*

FREE UNION **VIRGINIA**

THE LOUISE C. GODWIN NURSING HOME, INC.

"Nursing care with kindness"

AGED AND CHRONICALLY ILL
MODEST RATES

LOUISE GODWIN TAYLOR, R.N., Pres.
MARGARET K. MILLER, Sec.-Treas.

Bus. 55514 **813 Stockley Gardens**
Res. 83046 **Norfolk 7, Virginia**

Appalachian Hall • Asheville, North Carolina

ESTABLISHED 1916



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, SR., M.D.
Diplomate in Psychiatry
WM. RAY GRIFFIN, JR., M.D.

MARK A. GRIFFIN, SR., M.D.
Diplomate in Psychiatry
MARK A. GRIFFIN, JR., M.D.

For rates and further information write APPALACHIAN HALL, ASHEVILLE, N. C.

A Modern Hospital for the Treatment of Alcoholism Exclusively

- A private hospital offering scientific, institutional, medical, psychological, reflex, reduction and other methods for the rehabilitation of consent patients suffering from alcoholism.

- All equipment modern with facilities to take care of 50 patients both male and female.

- Under the direction of a competent licensed M. D. with five consultant physicians subject to call. Registered Nurses in charge 24 hours daily.



Approved and licensed by the Virginia State Hospital Board. Atop beautiful Mt. Regis, five miles West of Roanoke, on Highway 11, in the quiet serene mountains of Virginia, conducive to rest, comfort and recuperation. Doctors inspection invited. For information phone or write.

WHITE CROSS HOSPITAL

Five Miles West of Roanoke on Route No. 11.
Salem, Virginia — Phone Salem 287

WHITE CROSS HOSPITAL

Copyright 1948. H. N. Alford, Atlanta, Ga.

RICHMOND'S FINEST + ONE OF VIRGINIA'S LARGEST

TERRACE HILL NURSING HOME, INC.

"Understanding Care"



View Showing Part of 3½ Acres of Terrace Hill Nursing Home.

TERRACE HILL NURSING HOME is a privately managed nursing home specializing in 24 hour daily nursing care for elderly people, convalescent and chronic cases. Home-like atmosphere. Exclusive park-like grounds. Supervised diets. Nutritious food. Private and semi-private rooms with baths. Accommodations for 45 guests. Under supervision of a resident, registered nurse. Rates from $45.00 to $60.00 per week for room, board and general nursing care. Your inspection invited.

City, State and Nationally Approved and Registered

For Further Information or Reservation write to

DIRECTOR, Terrace Hill Nursing Home • 2112 Monteiro Ave. • Phone 3-3993 • Richmond 22, Va.

RIVERSIDE HOSPITAL, Newport News, Va.



A General Hospital (265 beds) with Departments in Medicine, Surgery, Obstetrics, Pathology, Radiology, Pediatrics and Nursing. The Hospital is accredited by the Council on Medical Education of the American Medical Association for training first year interns, residencies in the surgical specialties for one and two years, general practices two years full approval, internal medicine, and obstetrics and gynecology, and the School of Nursing is accredited by the Virginia State Board of Nurse Examiners.

DAVID E. WATSON,
Administrator

MISS MARY LOUISE HABEL, R.N.,
Director, School of Nursing

Gill Memorial Eye, Ear and Throat Hospital

Announces to the Profession

TWENTY-EIGHTH ANNUAL SPRING CONGRESS

in

OPHTHALMOLOGY AND OTOLARYNGOLOGY

April 4 to April 9, 1955

GUEST SPEAKERS

HENRY L. BIRGE, M.D. ..... Hartford, Conn.
PAUL BOEDER, M.D. ..... South Bridge, Mass.
WILLIAM B. CLARK, M.D., F.A.C.S. ..... New Orleans, La.
DAN M. GORDON, M.D. ..... New York, N. Y.
ANDERSON C. HILDING, M.D. ..... Duluth, Minn.
CHEVALIER L. JACKSON, M.D. ..... Philadelphia, Pa.
BERTHA S. KLIEN, M.D. ..... Chicago, Ill.
WALTER E. LOCH, M.D. ..... Baltimore, Md.
T. G. MARTENS, M.D. ..... Rochester, Minn.
DANIEL S. MILLER, M.D. ..... Boston, Mass.
THOMAS PAINE, M.D. ..... Ann Arbor, Mich.
MAJOR GENERAL DANIEL OGLE, M.D. ..... Washington, D. C.
R. TOWNLEY PATON, M.D., F.A.C.S. ..... New York, N. Y.
JAMES PURNELL, M.D. ..... New York, N. Y.
ALBERT D. RUEDEMANN, M.D., F.A.C.S. ..... Detroit, Mich.
ROBERT E. RYAN, M.D. ..... St. Louis, Mo.
RICHARD SCHNEIDER, M.D. ..... Ann Arbor, Mich.
JOHN SHELDON, M.D. ..... Ann Arbor, Mich.
G. EDWARD TREMBLE, M.D. ..... Montreal, Canada
GRANT WARD, M.D. ..... Baltimore, Md.

For further information write:

Superintendent, Box 1789 **Roanoke, Virginia**

Saint Albans Sanatorium

RADFORD, VIRGINIA



125-BED PRIVATE PSYCHIATRIC HOSPITAL FOR THE TREATMENT OF NERVOUS AND MENTAL DISORDERS, INCLUDING ALCOHOLISM AND ADDICTION.

STAFF

James P. King, M. D., Director

James K. Morrow, M. D. Thomas E. Painter, M. D. Daniel D. Chiles, M. D.

James L. Chitwood, M. D., Medical Consultant

Affiliated Clinic Offering Psychiatric and Psychological Evaluation and Therapy:

BLUEFIELD MENTAL HEALTH CENTER

1400 Bland Street **Bluefield, W. Va.**

David M. Wayne, M. D., Director

STUART CIRCLE HOSPITAL

413-21 Stuart Circle
RICHMOND, VIRGINIA

Medicine:
Manfred Call, III, M.D.
M. Morris Pinckney, M.D.
Alexander G. Brown, III, M.D.
John D. Call, M.D.
Wyndham B. Blanton, Jr., M.D.

Obstetrics and Gynecology:
Wm. Durwood Suggs. M.D.
Spotswood Robins, M.D.
Edwin B. Parkinson, M.D.

Orthopedics:
Beverley B. Clary, M.D.

Pediatrics:
Charles P. Mangum, M.D.
Edward G. Davis, Jr., M.D.

Ophthalmology, Otolaryngology:
W. L. Mason, M.D.

Pathology:
Regena Beck, M.D.

Surgery:
A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr., M.D.

Urological Surgery:
Frank Pole, M.D.

Oral Surgery:
Guy R. Harrison, D.D.S.

Plastic Surgery:
Hunter S. Jackson, M.D.

Roentgenology and Radiology:
Fred M. Hodges, M.D.
L. O. Snead, M.D.
Hunter B. Frischkorn, Jr., M.D.
William C. Barr, M.D.

Physiotherapy:
Mrs. Margaret Ashley

Director:
Charles C. Hough

Third Decade of Nursing

MODERN IN EQUIPMENT

MRS. PLYLER'S

KATE E. PLYLER (1876-1947)

OLD IN TRADITION

NURSING HOME

MARY INGRAM CLARK

CONVALESCENT — CHRONIC — AGED

- Equipped for oxygen and transfusions
- 30 special & general nurses
- 24-hour nursing care
- Centrally located
- 50-bed capacity
- Dietician
- Rates from $42.00 to $70.00 per week for room, board and general nursing care.





For further information write or call MRS. GENE CLARK REGIRER, Supt.

1613-15-17 Grove Avenue—Richmond, Virginia—Telephone 84-3221

RICHMOND EYE HOSPITAL
RICHMOND EAR, NOSE AND THROAT HOSPITAL
(COMBINED)

RICHMOND, VIRGINIA



A new non-profit Community Hospital specially constructed for the treatment of Eye, Ear, Nose and Throat Diseases, including Laryngeal Surgery, Bronchoscopy and Plastic Surgery of the Nose.

Professional care offered a limited number of charity patients.

ADDRESS: **JULIA WAGNER WATERS, R.N.,** ***Administrator*** **408 North 12th Street**

McGUIRE CLINIC

ST. LUKE'S HOSPITAL
RICHMOND, VIRGINIA

General Medicine

HUNTER H. MCGUIRE, M.D.
MARGARET NOLTING, M.D.
JOHN P. LYNCH, M.D.
W. T. THOMPSON, JR., M.D.
WM. H. HARRIS, JR., M.D.
JOHN B. CATLETT, M.D.

Orthopedic Surgery

JAMES T. TUCKER, M.D.
BEVERLEY B. CLARY, M.D.
EARNEST B. CARPENTER, M.D.

Ophthalmology, Otolaryngology

FRANCIS H. LEE, M.D.

General Surgery

WEBSTER P. BARNES, M.D.
JOHN H. REED, JR., M.D.
JOHN ROBERT MASSIE, JR., M.D.
JOSEPH W. COXE III, M.D.

Dental Surgery

JOHN BELL WILLIAMS, D.D.S.
GUY R. HARRISON, D.D.S.

Urology

AUSTIN I. DODSON, M.D.
CHAS. M. NELSON, M.D.
AUSTIN I. DODSON, JR., M.D.

Pediatrics

HUBERT T. DOUGAN, M.D.

Obstetrics

W. HUGHES EVANS, M.D.
W. H. COX, M.D.
JAMES M. WHITFIELD, M.D.

Bronchoscopy

GEORGE AUSTIN WELCHONS, M.D.

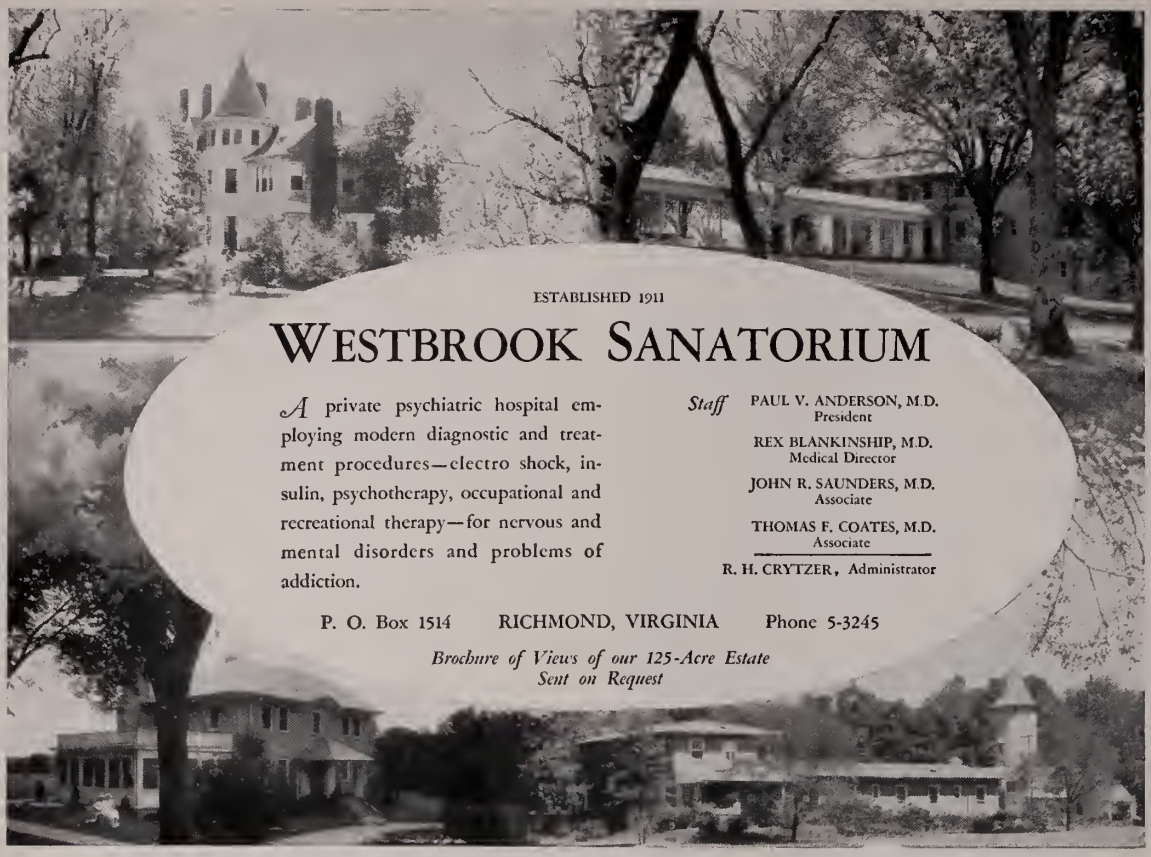
Roentgenology

J. LLOYD TABB, M.D.
STUART J. EISENBERG, M.D.

Pathology

J. H. SCHERER, M.D.

Treasurer: RICHARD J. JONES, BS., C.P.A.



ESTABLISHED 1911

WESTBROOK SANATORIUM

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

Staff

PAUL V. ANDERSON, M.D.
President

REX BLANKINSHIP, M.D.
Medical Director

JOHN R. SAUNDERS, M.D.
Associate

THOMAS F. COATES, M.D.
Associate

R. H. CRYTZER, Administrator

P. O. Box 1514 RICHMOND, VIRGINIA Phone 5-3245

Brochure of Views of our 125-Acre Estate Sent on Request

ST. ELIZABETH'S HOSPITAL

RICHMOND 20, VIRGINIA

STAFF

GUY W. HORSLEY, M.D.	General Surgery and Gynecology
D. COLEMAN BOOKER, M.D.	General Surgery and Gynecology
AUSTIN I. DODSON, M.D.	Urology
AUSTIN I. DODSON, JR., M.D.	Urology
DOUGLAS G. CHAPMAN, M.D.	Internal Medicine
ELMER S. ROBERTSON, M.D.	Internal Medicine
T. E. STANLEY, M.D.	Internal Medicine
FRED M. HODGES, M.D.	Roentgenology
L. O. SNEAD, M.D.	Roentgenology
HUNTER B. FRISCHKORN, JR., M.D.	Roentgenology
HELEN LORRAINE	Medical Illustration

ADMINISTRATION

WILLIAM SCOTT	Business Manager

SCHOOL OF NURSING

The School of Nursing is affiliated with The Johns Hopkins Hospital School of Nursing for a three months' course each in Pediatrics and Obstetrics, and with the Tucker's Hospital in Richmond for a 12 weeks course in Psychiatry.

ADDRESS: SUPERINTENDENT OF NURSES

Every Virginia Doctor Should Have These Books!

The history of medicine in the Old Commonwealth from Jamestown to the beginning of the present century is a work every doctor should be proud to own. Complete and intensely interesting.

Medicine In Virginia

In 3 Volumes

Published under Auspices of

Medical Society of Virginia

Reduced price to members of the Medical Society of Virginia

3 Volumes for $5.75

(formerly $9.75)

Order through

Medical Society of Virginia

1105 West Franklin Street

Richmond, Virginia.

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL

PRIVATELY MANAGED

SITUATED IN THE QUIET OF THE WEST END RESIDENTIAL SECTION

RIVERSIDE CONVALESCENT HOME

Sophia & Fauquier Sts. **Fredericksburg, Virginia**



For convalescent, aged, chronically ill, and retired persons.

Centrally located in Historic Fredericksburg, on the beautiful Rappahannock, in the former Mary Washington Hospital Building. Completely redecorated and refurnished.

Eighty Bed Capacity

Medical Supervision

Inspection Invited

Rates:
$30.00 to $75.00 per week

TUCKER HOSPITAL Inc.

212 West Franklin Street,

Richmond, Virginia

A private hospital accepting for diagnosis and treatment organic neurological conditions, selected psychiatric and alcoholic cases, metabolic disturbances of an endocrine nature, individuals who are having difficulty with their personality adjustments, and children with behavior problems. Patients with general medical disorders admitted for treatment under our staff of visiting physicians.

Under the Professional Charge of

DR. HOWARD R. MASTERS, DR. JAMES ASA SHIELD

AND ASSOCIATES

THE NEW YORK POLYCLINIC
MEDICAL SCHOOL AND HOSPITAL

(Organized 1881)

(The Pioneer Post-Graduate Medical Institution in America)

DERMATOLOGY AND SYPHILOLOGY

A three year course fulfilling all the requirements of the American Board of Dermatology and Syphilology. Also five-day seminars in Dermatopathology, for specialists and for general practitioners.

ANATOMY — SURGICAL

a. ANATOMY COURSE for those interested in preparing for Surgical Board Examination. This includes lectures and demonstrations together with supervised dissection on the cadaver.
b. SURGICAL ANATOMY for those interested in a general Refresher Course. This includes lectures with demonstrations on the dissected cadaver. Practical anatomical application is emphasized.
c. OPERATIVE SURGERY (cadaver). Lectures on applied anatomy and surgical technic of operative procedures on cadaver under supervision.
d. REGIONAL ANATOMY for those interested in preparing for Subspecialty Board Examinations.

PROCTOLOGY AND GASTROENTEROLOGY

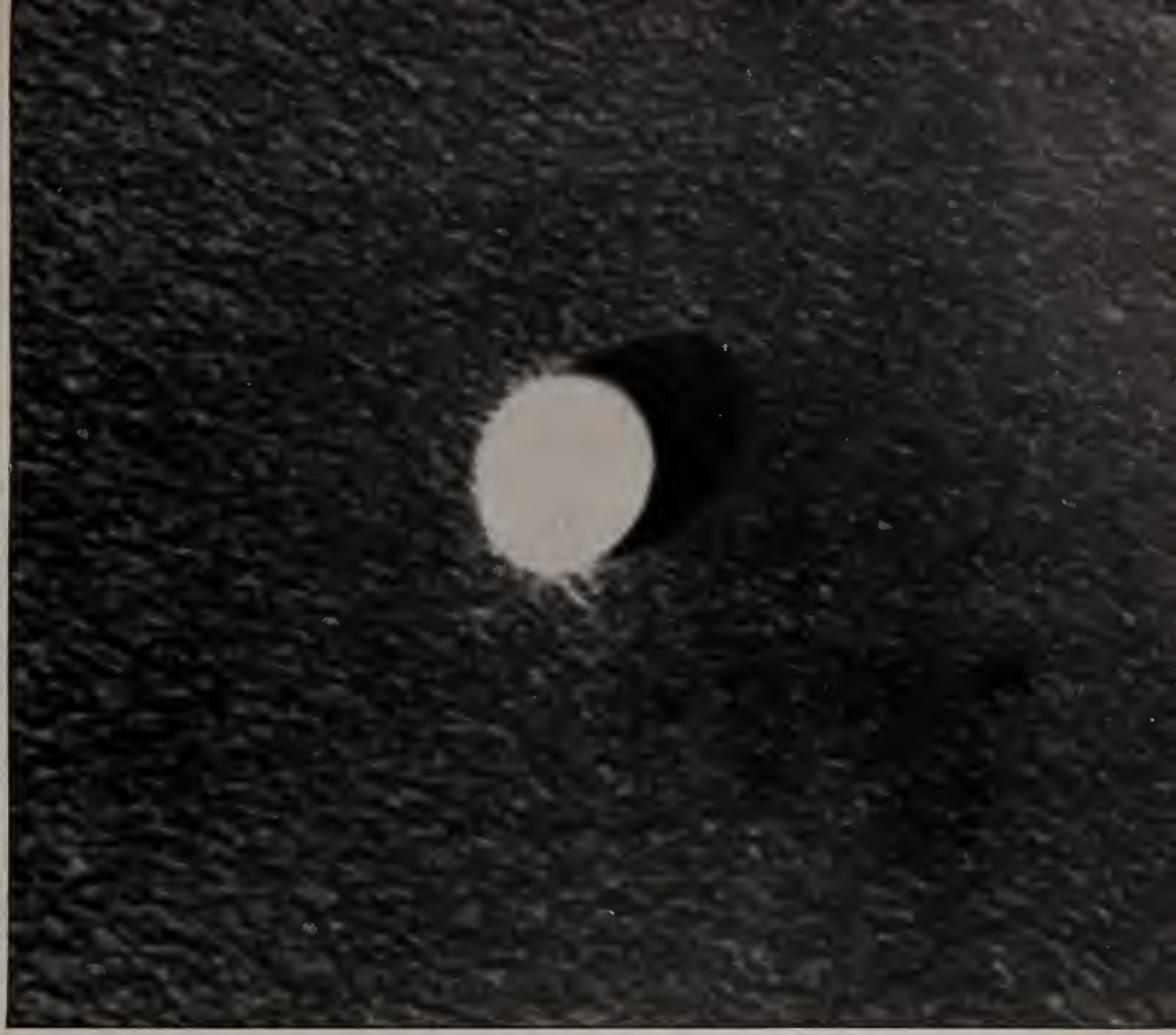
A combined course comprising attendance at clinics and lectures; instruction in examination, diagnosis and treatment; pathology, radiology, anatomy, operative proctology on the cadaver, anesthesiology, witnessing of operations, examination of patients preoperatively and postoperatively in the wards and clinics; attendance at departmental and general conferences.

ANESTHESIOLOGY

A three months full time course covering general and regional anesthesia with special demonstrations in the clinics and on the cadaver of caudal, spinal, field blocks, etc.; instruction in intravenous anesthesia, oxygen therapy, resuscitation, aspiration bronchoscopy; attendance at departmental and general conferences.

For Information concerning these and other Courses please Address:

THE DEAN, 345 West 50th St., New York 19, N. Y.



ELECTRON PHOTOMICROGRAPH

Staphylococcus aureus 44,000 X

Staphylococcus aureus (Micrococcus pyogenes var. aureus) is a Gram-positive organism commonly involved in a great variety of pathologic conditions, including

pyoderma • abscesses • empyema • otitis • sinusitis • septicemia

bronchopneumonia • bronchiectasis • tracheobronchitis • and food poisoning.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

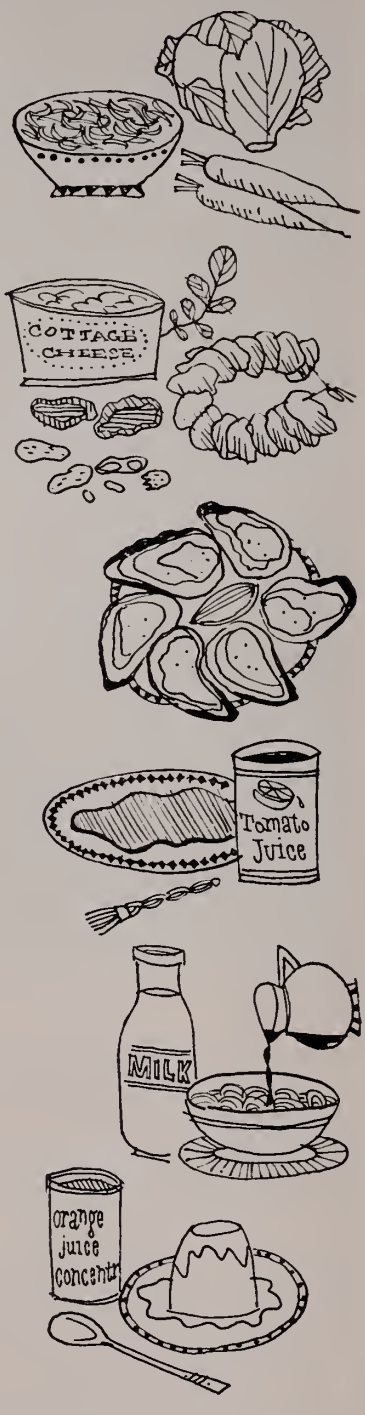
TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U. S. PAT. OFF.

High-Vitamin, High-Mineral Diet the natural way!



Foods high in vitamins and minerals not only give your patient good nutrition naturally, but also may supply vital elements still unknown. These "diet do's" may tempt him to rely more on food than supplements for his vital nutrients.

These foods are best served raw—

Shredded new cabbage and carrot slaw goes nicely with any meal, and combines the benefits of vitamins A and C with some calcium.

Dried apricots and figs stuffed with cottage cheese and peanuts sit prettily in a bed of watercress, and provide calcium, iron, vitamins A, B_2, niacin, and C.

Oysters are exceptionally rich in both iron and calcium and carry a generous amount of vitamins A and D as well.

These good foods can be made even better—

Beef liver ranks high in iron, vitamins A, and B-complex. Brushed with tomato juice an hour before cooking, it turns tender and tasty.

Oatmeal, rich in iron, gets even more and a plus in calcium and vitamin B_6 when served with molasses and milk.

Custard contains calcium and vitamins A, B_1, and B_2. A topping of orange juice concentrate gives your patient a bonus in vitamin C.

Although these "do's" list only the more familiar vitamins and minerals, the trace elements and other micronutrients are no less important. And a varied diet will help your patient get the vital body regulators he needs.

United States Brewers Foundation

Beer—America's Beverage of Moderation

An 8-oz. glass of beer contains 10 mg. calcium, 50 mg. phosphorus, 1/8th minimum daily requirement of niacin, and smaller amounts of other B-complex vitamins.(Average of American beers)

If you'd like reprints for your patients, please write United States Brewers Foundation, 535 Fifth Avenue, New York 17, N. Y.

NOT ARTHRITIS BUT ARTHRALGIA...

If the patient complaining of aching joints is a woman between 37 and 54 years of age, it is highly possible that she is suffering from arthralgia rather than arthritis.[1] It has been estimated that arthralgia occurs in about 40 per cent of women with estrogen deficiency, and is exceeded in frequency only by symptoms of emotional or vasomotor origin.[2] In fact, arthralgia may be as indicative of declining ovarian function as the classic menopausal hot flushes.

Arthralgia, however, is just one of a vast number of distressing but ill-defined symptoms that may be precipitated by the loss of estrogen as a "metabolic regulator." Other good examples are insomnia, headache, easy fatigability, and tachypnea.

Because these symptoms sometimes occur years before or even long after cessation of menstruation, they are not always readily associated with estrogen deficiency, and the tendency may be to treat them with medications other than estrogen. Obviously, sedatives and other palliatives cannot be expected to produce a satisfactory response if an estrogen deficiency exists. Only estrogen replacement therapy will correct the basic cause of the disorder.

"Premarin" is an excellent preparation for the replacement of body estrogen. In "Premarin" all components of the complete equine estrogen-complex are meticulously preserved in their natural form. "Premarin" produces not only prompt symptomatic relief but a distinctive "sense of well-being" which is most gratifying to the patient.

1. Greenblatt, R. B., and Kupperman, H. S.: M. Clin. North America *30*:576 (May) 1946. 2. McGavack, T. H., in Goldzieher, M. A., and Goldzieher, J. W.: Endocrine Treatment in General Practice, New York, Springer Publishing Company, Inc., 1953, p. 225.

"PREMARIN"®

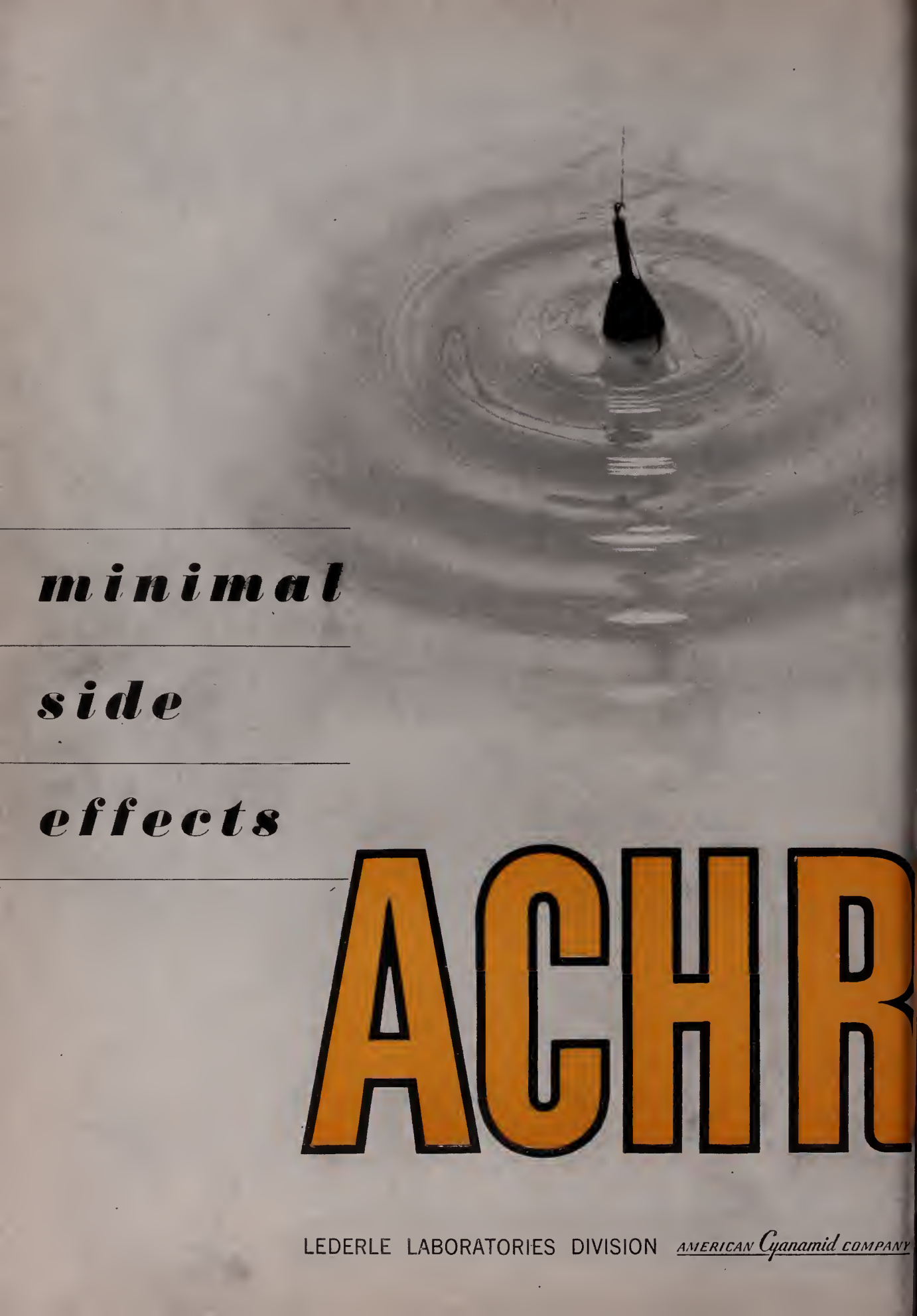
ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

Estrogenic substances (water-soluble) also known as conjugated estrogens (equine)
Available in tablet and liquid form

has no odor . . . imparts no odor

NEW YORK, N. Y. Ayerst MONTREAL, CANADA

5410



LEDERLE LABORATORIES DIVISION AMERICAN Cyanamid COMPANY

One of the notable qualities of ACHROMYCIN, the Lederle brand of Tetracycline, is its advantage of minimal side effects. Furthermore, this true broad-spectrum antibiotic is well-tolerated by all age groups.

In each of its various dosage forms, ACHROMYCIN provides more rapid diffusion for prompt control of infection. In solution, it is more soluble and more stable than certain other antibiotics.

ACHROMYCIN has proved effective against a wide variety of infections caused by gram-positive and gram-negative bacteria, rickettsia, and certain virus-like and protozoan organisms.

ACHROMYCIN ranks with the truly great therapeutic agents.

OMYCIN*

HYDROCHLORIDE
Tetracycline HCl Lederle

earl River, New York

Lederle

*REG. U.S. PAT. OFF

what does BREAD *contribute?*



Some twelve years ago the baking industry began large-scale, nationwide commercial production of enriched breads. Today such breads represent about three-fourths or more of all the marketed white bread in the United States,[1] and rank high among the foods which contribute essential nutrients—in important amounts—at low cost—to the nutrition of the American people.[2]

It is not so long since deficiencies of certain B vitamins and iron were regarded as sufficiently widespread in the United States to merit serious attention. By providing broad distribution of these important nutrients in effective amounts, commercial enriched breads have contributed notably to reducing the incidence of these deficiencies,[1] as reported for instance among patients of charity clinics throughout the country.[3] It is authoritatively believed that the enrichment of bread has improved the health of a large segment of our population.[4]

Per pound, enriched breads today contribute—as required by government definition and standards of identity[5]—at least 1.1 mg. of thiamine, 0.7 mg. of riboflavin, 10 mg. of niacin, and 8 mg. of iron. Thus they are distinctly superior to homemade as well as bakers' white breads of former years.

Each pound of commercial enriched breads contributes also 39 Gm. of protein—wheat flour protein supplemented with milk protein—biologically applicable to the growth processes as well as to tissue maintenance.[2]

Another significant contribution of such breads is 400 mg. of calcium per pound.[6] Last not least, and rather to be praised than to be deprecated, is the low-cost contribution of calories which bread makes to energy needs.

The appended table shows the important amounts of six essential nutrients contributed by six ounces of marketed enriched breads. The table also shows the notable percentages of the National Research Council's recommended daily allowances this small amount of present-day enriched breads represent.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

NUTRIENTS AND CALORIES CONTRIBUTED BY 6 OUNCES OF ENRICHED MARKET BREADS AND THEIR PERCENTAGES OF RECOMMENDED DAILY DIETARY ALLOWANCES*

Nutrients and Colories	Protein	Thiomine	Riboflavin	Niacin	Iron	Calcium	Colories
Amounts	14.5 Gm.[7]	0.41 mg.[7]	0.26 mg.[7]	3.8 mg.[7]	4.5 mg.[6]	150 mg.[6]	468[7]
Percentages of Allowances	21%	34%	14%	32%	38%	15%	20%

*Daily dietary allowances recommended by National Research Council for a sedentary man (154 lb.).

THE VIRGINIA BAKERS COUNCIL

In co-operation with

THE AMERICAN BAKERS ASSOCIATION

1. Geddes, W.F.: Cereal Chemists Guard Nutrition, Agricultural and Food Chemistry *1*:38 (Apr.) 1953.
2. Sherman, H.C.: Chemistry of Food and Nutrition, ed. 8, New York, The Macmillan Company, 1952, pp. 597-600; 646.
3. Flour and Bread Enrichment, 1949-50: Prepared by The Committee on Cereals, Food and Nutrition Board, National Research Council, 1950.
4. Sherman, H.C.: The Nutritional Improvement of Life, New York, Columbia University Press, 1950, pp. 86-87.
5. Bakery Products; Definitions and Standards of Identity: Federal Register *17*:4453 (May 15) 1952.
6. Data furnished by the Laboratories of The American Institute of Baking, Chicago, Illinois.
7. Watt, B.K., and Merrill, A.L.: Composition of Foods—Raw, Processed, Prepared; United States Department of Agriculture Agriculture Handbook No. 8, 1950.

Complete
Printing and Binding Service

Commercial, Book and Job Work, Catalogues—Publications
Advertising Literature, Booklets—Broadsides
Office and Factory Forms
Loose-Leaf and Manifold Forms—Ledger Leaves and Loose-Leaf Binders
Paper Ruling
Complete Binding Equipment

Complete Service Under One Roof

Aequaint us with your requirements. We serve you efficiently and economically.

Dial 3-1881

WILLIAMS PRINTING CO.

11-13-15 North Fourteenth Street **RICHMOND, VIRGINIA**

For the
Discriminating
Eye Physician

Depend on the Services of a Guild Optician

GUILD PRESCRIPTION OPTICIANS OF AMERICA

in
Lynchburg, Virginia

A. G. JEFFERSON

Ground Floor **Allied Arts Bldg.**

Exlusively Optical



Cooper Creme

no finer name in contraceptives

active ingredients:
Trioxymethylene .04%
Sodium Oleate 0.67%



FREE

Whittaker Laboratories, Inc. Dept. 15
Peekskill, New York

Please send: Full Size $1.50 Combination Package Free—Cooper Creme/Dosimeter.

Name _____ M.D.

Address _____

City _____ Zone _____ State _____

Whittaker Laboratories, Inc., Peekskill, New York


For Nasal Congestion
in THE COMMON COLD
Physiologically acceptable Neo-Synephrine hydrochloride solution promptly constricts the engorged nasal capillaries which are responsible for nasal congestion in the common cold. When the nasal mucosa is reduced to its normal state, the nasal passages resume their proper patency, drainage is possible, and the patient can again breathe freely.
By its shrinking action on the nasal mucosa, Neo-Synephrine helps to keep the sinuses aerated and the openings to the eustachian tubes clear.
Neo-Synephrine within minutes produces decongestion that lasts for hours.
NEO-SYNEPHRINE®
Hydrochloride
0.25%, 0.5% and 1% Solution
New: Nasal Spray — Plastic Squeeze Bottle
Winthrop-Stearns INC. NEW YORK 18, N.Y. WINDSOR, ONT.
Neo-Synephrine
(brand of phenylephrine),
trademark reg. U.S. Pat. Off.



ELECTRON PHOTOMICROGRAPH

Streptococcus faecalis 40,000 X

Streptococcus faecalis is a Gram-positive organism commonly involved in a variety of pathologic conditions, including urinary tract infections • subacute bacterial endocarditis • peritonitis.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U. S. PAT. OFF.

She shot the ashes off the Kaiser's cigaret

HER name was Phoebe Mozee and she was born in Darke County, Ohio, in 1860, and she could shoot the head off a running quail when she was twelve years old.

Once, at the invitation of Kaiser Wilhelm II of Germany, she knocked the ashes off a cigaret he was holding in his mouth.

When she out-shot the great exhibition marksman, Frank Butler, he fell in love with her and married her and they were ideally happy together for the rest of their long lives.

She could handle a rifle or a six-gun with an artistry unsurpassed by that of any human being before her time or, probably, since. And when she appeared with Sitting Bull and other notables in Colonel Cody's Wild West Show, she thrilled your father and mother—not as Phoebe Anne Oakley Mozee but as "Little Sure Shot," the immortal Annie Oakley.

Annie Oakley, the poor back-country orphan girl who made her way to world-wide fame, was the very spirit of personal independence. That spirit is just as much alive in our generation as it was in hers. It is among the great assets of our people—and our nation. And it is one very great reason why our country's Savings Bonds are perhaps the finest investment in the world today.

Make that investment work for you! Increase your personal independence and your family's security, by buying United States Savings Bonds—starting now!



It's actually easy to save money—when you buy United States Series E Savings Bonds through the automatic Payroll Savings Plan where you work! You just sign an application at your pay office; after that your saving is done *for* you. And the Bonds you receive will pay you interest at the rate of 3% per year, compounded semiannually, for as long as 19 years and 8 months if you wish! Sign up today! Or join the Bond-A-Month Plan at your bank.

For your own security—and your country's, too—
invest in U. S. Savings Bonds!

The U. S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.

[As advertised in the journal of the AMERICAN MEDICAL ASSOCIATION]

Income* for members of the Virginia Medical Profession from the first day** of sickness or injury . . . .

now!

Not for only 26 weeks—Not for only 52 weeks

but even for your entire lifetime

House Confinement is not required at any time
Accidental loss of hands, feet or eyesight pays monthly benefits—not just lump sum.

tax free dollars

Disability income in not taxable. For example: $3600.00 a year from our policy is equivalent to about $5000.00 regular income.

extra benefits

Double monthly benefits when you are hospitalized for as long as three months.
Unusually large accidental death benefits
Double benefits for specified travel accidents

plus important features

Waiver of Premium Provision
Commercial Air Travel Passenger Coverage
No automatic termination age

**In the event of total disability and Total Loss of Time*

***Benefit payments start from first day of medical attention*

Mail Coupon today while you are still healthy

UNITED INSURANCE COMPANY, Lifetime Dept.
Eig Building, Silver Spring, Maryland

I would like to know more about your lifetime income protection.

NAME _____ AGE _____

ADDRESS _____

or clip to your letterhead

TRI-STATE MEDICAL MEETING

February 21 and 22

HOTEL CHAMBERLIN — OLD POINT COMFORT, VIRGINIA

President—F. E. Kredel, M.D., Charleston, S. C.
President-Elect—Paul Camp, M.D., Richmond, Va.
Secretary-Treasurer—R. B. Davis, M.D., Greensboro, N. C.

Monday, February 21

PROGRAM—CARDIOLOGY—MEDICAL AND SURGICAL

Surgery of Arteries	William H. Muller, M. D. University of Virginia
Surgery of Heart	Thomas N. P. Johns, M. D. Johnston-Willis Hospital Richmond, Virginia
Surgery of Hypertension	Keith Grimson, M. D. Duke University
Treatment of Peripheral Vascular Diseases	Eugene L. Lowenberg, M. D. Norfolk, Virginia
Questions and Answers	
Intermission	
Common Eye Injuries	Rudolph Thomason, M. D. Edgar Childrey, M. D. Richmond, Virginia
Brain Tumors	James W. Watts, M. D. Washington, D. C.
Congenital Heart Disease	Dale Groome, M. D. Charleston, South Carolina
Hypertension	Herbert G. Langford, M. D. Richmond, Virginia
Coronary Disease	James L. Camp, III, M. D. University of Virginia
Cardiac Emergencies in General Practice	James L. Hamner, M. D. Amelia, Virginia

Tuesday, February 22

Diseases of the Lung	Dean B. Cole, M. D. Richmond, Virginia
Obstetrics	Robert A. Ross, M. D. University of North Carolina Waverly R. Payne, M. D. Newport News, Virginia
Clinical Pathological Conference	Benjamin Baker, M. D. Johns-Hopkins Hospital Baltimore, Maryland Gordon Hennigar, M. D. Medical College of Virginia
Recess	
Neuro-Surgery	Charles Troland, M. D. John Meredith, M. D. Medical College of Virginia
Rehabilitation	James Conner, M. D. Kecoughtan VA Hospital Kecoughtan, Virginia
Treatment of Burns	Major Herrick Thomas, MC. Air Force Hospital Langley Field, Virginia

For Further Information, contact the Chairman of the Program Committee— Dr. Paul Camp, Professional Building, Richmond, Virginia, or Secretary-Treasurer, Dr. R .B. Davis, 122 South Greene Street, Greensboro, North Carolina.

1954 Advertisers

Abbott Laboratories
American Bakers Association
American Meat Institute
Ames Company, Incorporated
Appalachian Hall
Audiphone Company of Virginia
Audivox, Incorporated
Ayerst Laboratories
Baker Laboratories, Incorporated
The Bayer Company
Bilhuber-Knoll Corporation
Brown & Williamson Tobacco Corporation
Canada Dry Ginger Ale, Incorporated
Casimir Funk Laboratories, Incorporated
Ciba Pharmaceutical Products
The Coca Cola Company
Connecticut Mutual Life Insurance Company
Corn Products Sales Company
Davies, Rose & Company, Limited
First & Merchants National Bank
Fresh'nd Aire Company
Garst Brothers Dairy Incorporated
Geigy Pharmaceuticals
General Electric Company
Gill Memorial Eye, Ear and Throat Hospital
Louise C. Godwin Nursing Home
Jaguar Cars North American Corporation
A. G. Jefferson
Johnston Willis Hospital
The Keeley Institute
Keleket X-Ray Corporation
Charles B. Knox Gelatine Company
Lakeside Laboratories, Incorporated
Lederle Laboratories
Eli Lilly & Company
P. Lorillard Company
McGuire Clinic
Mead Johnson & Company
Medical College of Virginia Hospitals
New York Polyclinic Medical School & Hospital
Patterson Drug Stores
Parke, Davis & Company
Peoples Drug Stores, Incorporated
Charles Pfizer & Company, Incorporated
Mrs. Plyler's Nursing Home
Powers & Anderson, Incorporated
Professional Service Company
Richmond Eye Hospital
Richmond Ear, Nose and Throat Hospital
Richmond Hotels, Incorporated
Riker Laboratories, Incorporated
Riverside Convalescent Home
Riverside Hospital
J. B. Roerig & Company
St. Albans Sanatorium
St. Elizabeth's Hospital
St. Luke's Hospital
Schering Corporation
Sealy Mattress Company
G. D. Searle & Company
Sharp & Dohme
E. R. Squibb & Sons
Stuart Circle Hospital
Terrace Hill Nursing Home
The Thompson Homestead School
Tucker Hospital, Incorporated
U. S. Brewers Foundation
U. S. Vitamin Corporation
United Insurance Company
The Upjohn Company
Valentine Company, Incorporated
Westbrook Sanatorium
White Cross Hospital
Whittaker Laboratories, Incorporated
Williams Printing Company
Wine Advisory Board
Winthrop-Stearns Incorporated
Wyeth Incorporated

TO OUR ADVERTISERS:

We extend our sincere thanks for your patronage during 1954.

Your recognition of our Journal has enabled us to produce a publication worthy of its place in medical literature.

Our members have found your advertisements informative and helpful in the securing or prescribing of accepted products and services during the past year.

It is a certainty that they will continue to patronize the concerns whose advertisements appear regularly in our pages.

OUR BEST WISHES FOR A SUCCESSFUL AND PROSPEROUS 1955

Virginia Medical Monthly

Provides a protein margin of safety



- **for greater nitrogen retention**
- **for firmer muscle mass**

LIQUID



POWDERED

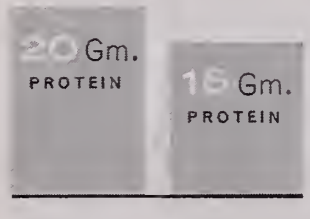


LACTUM

NUTRITIONALLY SOUND FORMULA FOR INFANTS

In the bottle-fed infant, a higher protein intake, with greater nitrogen retention, results in firmer muscle mass, better tissue turgor and better motor development.[1] A protein intake that does not maintain positive nitrogen balance "cannot be considered optimal or even safe for any length of time."[2]

During the first year of life, the infant's nourishment is derived primarily from his formula. Hence it is especially important that the formula be generous in protein. The usual Lactum® feedings provide 2 Gm. protein per pound of body weight—25% more than the Recommended Daily Allowance of 1.6 Gm. per pound (3.5 Gm. per kilogram).



Lactum formula for a 10 lb. infant

Recommended Daily Allowance for a 10 lb. infant

1. Jeans, P. C., in A.M.A. Handbook of Nutrition, Philadelphia, Blakiston, 1951, pp. 275-298. 2. Stare, F. J., and Davidson, C. S., in The Proteins, American Medical Association, 1945.

MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA, U.S.A.

MEAD

OFFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

VIRGINIA MEDICAL MONTHLY

FEB -9 1955 LIBRARY

Contents

Introduction to Asthma Conference, Oscar Swineford, Jr. . . . 49
Pathology and Abnormal Physiology in Asthma, John L. Guerrant. . . . 51
The Mechanisms of Psychogenic Asthma, Richard W. Garnett, Jr. . . . 61
Classification and Etiologic Diagnosis of Asthma, Oscar Swineford, Jr. . . . 64
The Symptomatic Treatment of Asthma, Wyndham B. Blanton . . . 72
Treatment of Sinusitis in Patients with Asthma, G. S. Fitz-Hugh . . . 76
The Treatment of Atopic Asthma, John L. Guerrant . . . 79
The Psychotherapeutic Approach to Asthma, Richard W. Garnett, Jr. . . . 82
Treatment of Infectious Asthma, Oscar Swineford, Jr. . . . 85
Management of Asthma in Children, Susan Dees . . . 90
Aspiration of Secretions in Asthma, George R. Minor . . . 94
Closing Panel on Asthma, Wyndham B. Blanton, Presiding . . . 96

(Continued on page 6)

FEB -9 1955 LIBRARY

effective treatment and enticing treat

ILOTYCIN PEDIATRIC

(Erythromycin, Lilly) Ethyl Carbonate

another reason to consider ILOTYCIN FIRST

Lilly



for the epileptic

Modern diagnostic methods and effective anticonvulsants now help the patient with epilepsy enjoy greater freedom from seizures. And with a more understanding society, greater independence is assured.

DILANTIN® SODIUM (diphenylhydantoin sodium, Parke-Davis)

an established anticonvulsant of choice, alone or in combination, for control of grand mal and psychomotor seizures -- without the handicap of somnolence.

DILANTIN Sodium is supplied in a variety of forms -- including Kapseals® of 0.03 Gm. (½ gr.) and 0.1 Gm. (1½ gr.) in bottles of 100 and 1,000.

greater independence



MEDICAMENTA VERA

Parke, Davis & Company

DETROIT, MICHIGAN

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April 1874)

Published monthly by The Medical Society of Virginia.

PUBLICATION COMMITTEE

Lewis H. Bosher, Jr., M.D., *Chairman and Editor*
Wyndham B. Blanton, M.D. Lloyd B. Burk, M.D.
with
EDITORIAL BOARD
J. Morrison Hutcheson, M.D.
Cato Drash, M.D.
Ennion S. Williams, M.D.
A. Brownley Hodges, M.D.
Hugh H. Trout, Jr., M.D.

The MONTHLY is not responsible for the opinions and statements of its contributors.

All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

Managing Editor—E. SPENCER WATKINS
1105 West Franklin Street, Richmond 20.

Annual Subscription—$2.00 Single Copies—25¢

Entered as Second Class Matter at the Postoffice, Richmond, Virginia, under the Act of March 3, 1879.

THE MEDICAL SOCIETY OF VIRGINIA

OFFICERS

President—CARRINGTON WILLIAMS, M.D., Richmond

President-Elect—JAMES P. KING, M.D., Radford

Vice-Presidents—JAMES W. LOVE, M.D., Alexandria
WAVERLY R. PAYNE, M.D., Newport News
BENJAMIN W. RAWLES, JR., M.D., Richmond

Executive Secretary-Treasurer—ROBERT 1. HOWARD, Richmond

Councilors—A. A. CREECY, M.D., Newport News
WALTER P. ADAMS, M.D., Norfolk
GUY W. HORSLEY, M.D., Richmond
W. J. OZLIN, M.D., South Hill
L. P. BAILEY, M.D., Nathalie
FRANK A. FARMER, M.D., Roanoke
H. W. MILLER, M.D., Woodstock
McLEMORE BIRDSONG, M.D., Charlottesville
JAMES P. WILLIAMS, M.D., Richlands
HARRY C. BATES, JR., M.D., Arlington

Delegates to A.M.A.
J. M. HUTCHESON, M.D., Richmond
VINCENT W. ARCHER, M.D., Charlottesville

Alternate Delegates to A.M.A.
ALLEN BARKER, M.D., Roanoke
W. LINWOOD BALL, M.D., Richmond

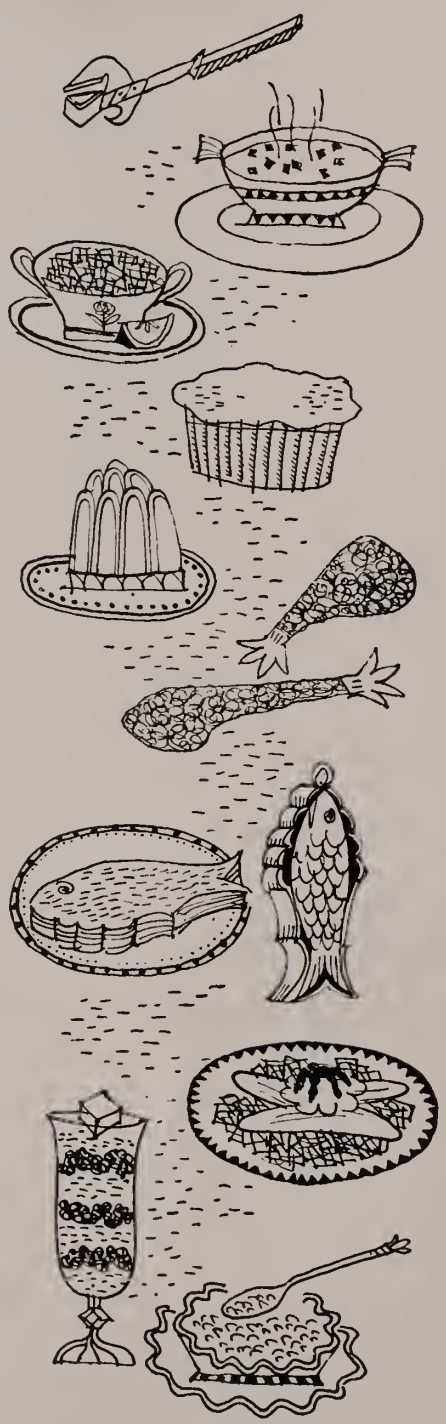
Executive Office—1105 W. Franklin St., Richmond 20.

INDEX TO ADVERTISERS

Abbott Laboratories ---- 11-22-44-45
American Medical Association ---- 16
Ames Company, Inc. ---- Inside Back Cover
Appalachian Hall ---- 31
Atlanta Graduate Medical Assembly, The—Southeastern Surgical Congress, The ---- 6
Audivox ---- 40
Ayerst ---- 7
Baker Laboratories, Inc., The ---- 21
Canada Dry Ginger Ale ---- 46
Coca-Cola ---- 16
Davies, Rose & Co., Ltd. ---- 37
Eli Lilly and Company ---- Front Cover, 26
Garst Bros. Dairy, Inc. ---- 6
Geigy Pharmaceuticals ---- 18
General Electric ---- 19
Gill Memorial Eye, Ear and Throat Hospital ---- 32
Godwin Nursing Home, The Louise C. ---- 31
Imperial Car Distributors, Inc.—Jaguar Automobiles ---- 23
Jefferson, A. G. ---- 7
Johnston-Willis Hospital ---- 37
Keeley Institute, The ---- 29
Lakeside Laboratories, Inc. ---- 38
Lederle Laboratories Divison ---- 12-13
McGuire Clinic—St. Luke's Hospital ---- 33
Mead Johnson & Company ---- Back Cover
Medical College of Virginia —Hospital Division ---- 31
New York Polyclinic Medical School and Hospital, The ---- 10
Parke, Davis & Company ---- 2-3
Patterson's Safe Service Drug Stores ---- 43
People's Service Drug Stores, Inc. ---- 48
Pfizer Laboratories ---- 14
Plyler's Nursing Home, Mrs. ---- 34
Richmond Eye Hospital—Richmond Ear, Nose and Throat Hospital ---- 34
Richmond Hotels, Inc. ---- 16
Riverside Convalescent Home ---- 36
Riverside Hospital ---- 32
Saint Albans Sanatorium ---- 28
Schering Corporation ---- 24-25
Schieffelin & Company ---- 43
Sealy Mattress Company ---- 43
Searle & Co., G. D. ---- 27
Sharp & Dohme ---- 20
State Board of Medical Examiners of Virginia, The ---- 43
St. Elizabeth's Hospital ---- 35
Stuart Circle Hospital ---- 35
Terrace Hill Nursing Home, Inc. ---- 33
Thompson Homestead School, The ---- 31
Tucker Hospital, Inc. ---- 28
United States Brewers Foundation ---- 5
Upjohn Company, The ---- 8-47
U. S. Savings Bonds ---- 42
Valentine Company, Inc. ---- 46
Viceroy Cigarettes ---- 41
Virginia Bakers Council, The ---- 9
Westbrook Sanatorium ---- 36
White Cross Hospital ---- 30
Williams Printing Company ---- 7-10
Wine Advisory Board ---- 39
Winthrop-Stearns, Inc. ---- 15
Wyeth ---- 17

The "quick'n easy" of Low-Residue Diets...

Starting with a can opener as key to this diet, your patient has a wide choice of unseasoned strained or chopped foods. And these diet "do's" can guide him toward tempting, tasty dishes.



Vary the texture for taste appeal—

Consommé can be served hot with crisp croutons, or cold and jellied in shimmering peaks. Puréed vegetables folded into a well-beaten egg can be baked to a puff, or molded in gelatin. Finely chopped beef moistened with broth spreads for a sandwich—mixed with bread crumbs, it shapes into patties. Eggs can be soft or hard cooked by simmering—or scrambled in a double boiler.

Serve prettily for eye appeal—

Chopped meat can be shaped like a chop—minced chicken like a drumstick—before baking. And flaked fish in lemon gelatin looks true to nature when your patient uses a mold.

White potatoes mashed with a little broth whip up creamy and light with cottage cheese. And mashed sweet potatoes made smooth with orange juice can be baked in the orange shells.

Banana split salad may tempt your patient. For the "greens," suggest lime gelatin shredded with a fork. Add a ball of cottage cheese to the split banana and top with puréed apricots.

Rice cooked in pineapple juice, water, and sugar makes a golden dessert. And for a gay parfait—alternate layers of farina pudding with puréed plums. Then put a sparkling cube of clear jelly on top.

Of course, you'll want to tell your patient just which foods you want him to have. And these ideas can help him enjoy them in many ways that are quick, easy, and appetizing.

United States Brewers Foundation

Beer—America's Beverage of Moderation

pH—4.3, 104 calories/8 oz. glass (Average of American beers)

If you'd like reprints for your patients, please write United States Brewers Foundation, 535 Fifth Avenue, New York 17, N. Y.

You are invited to attend the joint meeting of

THE ATLANTA GRADUATE MEDICAL ASSEMBLY

and

THE SOUTHEASTERN SURGICAL CONGRESS

February 21-24, 1955

Atlanta Biltmore Hotel

Atlanta, Georgia

Among the speakers to appear on this program are: Dr. Waltman Walters, Mayo Clinic; Dr. George Crile, Jr., Cleveland; Dr. Chevalier L. Jackson, Philadelphia; Dr. Alton Ochsner; Dr. Elmer C. Bartels, Lahey Clinic; Dr. William Dameshek, Boston; Dr. Arthur M. Master, New York; Dr. George T. Pack, New York; Dr. Reed Nesbit, Ann Arbor.

The following symposia will be presented:

"Cancer of the Lung." Moderator: Dr. C. C. Aven. Collaborators: Drs. Burgess Gordon, George Pack, J. A. del Regata.

"Arthritis and Allied Diseases." Moderator: Dr. Vernon E. Powell. Collaborators: Drs. Currier McEwen, Elmer C. Bartels, Edgar S. Gordon.

"Angina Pectoris." Moderator: Dr. Eugene B. Ferris. Collaborators: Drs. Arthur Master, Herrman Blumgart, Robert Wilkins.

"Obstetrics and Gynecology." Moderator: Dr. John B. Cross. Collaborators: Drs. Roger Scott, Willis Brown, Meyer Saklad.

NOTE: Registration fee of $10.00 will admit you to all scientific sessions of both Assemblies. We URGE prompt registration and hotel reservation. Write Dr. B. T. Beasley, Secretary, Southeastern Surgical Congress, Hurt Building, Atlanta, or Mrs. S. R. Roberts, Executive Secretary, Atlanta Graduate Medical Assembly, 15 Peachtree Place, N. W., Atlanta.

GRADE A PASTEURIZED PRODUCTS

GARST BROS. DAIRY INC.

DIAL 5501

GRADE A MILK
HOMOGENIZED MILK (Natural Vitamin D added)
GOLDEN GUERNSEY MILK
GOLDEN FLAKE BUTTERMILK
SKIM MILK—COFFEE CREAM
WHIPPING CREAM—COTTAGE CHEESE
DARI-RICH CHOCOLATE MILK
GARST BROS. DAIRY BUTTER

"ROANOKE'S MOST MODERN DAIRY"

DIAL 5501

LABORATORY CONTROL
FOR YOUR PROTECTION

CONTENTS

(Continued)

Notes On Pulmonary Tuberculosis	101
Mental Health	104
Public Health	106
Medico-Legal Notes	108
Book Announcements	109
Woman's Auxiliary	110
Correspondence	111
President's Message	112
Editorial	113
Society Proceedings	115
News	116
Obituaries	118

INDEX TO ADVERTISERS—Page 4.

Entered as Second Class Matter at the Postoffice. Richmond. Va

"Premarin" relieves menopausal symptoms with virtually no side effects, and imparts a highly gratifying "sense of well-being."

"Premarin"®—Conjugated Estrogens (equine)

5511

PRICES FOR REPRINTS

of Articles Appearing in

The Virginia Medical Monthly

Trimmed Size 5¼x7⅝ ins. Type Page 3x5½ ins.

Minimum Order 100 Copies

	100	250	500	1,000	2,000
4 pp.	$ 6.00	$ 6.60	$ 8.00	$ 9.80	$13.70
8 "	10.70	12.10	13.20	17.00	23.50
12 "	15.70	17.90	20.10	25.60	37.80
16 "	16.40	19.20	22.20	28.30	40.40
20 "	18.90	23.80	27.00	33.00	49.40
24 "	21.10	25.70	28.90	38.10	52.70
32 "	28.00	34.00	39.50	55.60	75.00
Extra for Covers	6.60	7.60	10.50	12.50	18.90
Envelopes:					
Printed	4.00	6.10	8.30	13.20	23.70
Blank	1.20	2.80	4.40	8.30	16.50

Prices F.O.B. Richmond, Va. Shipments will be sent postpaid if check sent with order.

Orders must be placed before type is distributed.

WILLIAMS PRINTING CO.

11-13-15 North 14th Street

RICHMOND, VIRGINIA

For the Discriminating Eye Physician

Depend on the Services of a Guild Optician

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA Rx

in

Lynchburg, Virginia

A. G. JEFFERSON

Ground Floor **Allied Arts Bldg.**

Exlusively Optical

Upjohn

Allergic skin conditions, pruritus . . .

Cortef* ACETATE *ointment*

Supplied:

1.0% (10 mg. per Gm.)
in 5 Gm. and 20 Gm. tubes
2.5% (25 mg. per Gm.)
in 5 Gm. and 20 Gm. tubes

f-Cortef** ACETATE *ointment*

Supplied:

0.1% (1 mg. per Gm.)
in 5 Gm. tubes
0.2% (2 mg. per Gm.)
in 5 Gm. tubes

*REGISTERED TRADEMARK FOR THE UPJOHN BRAND OF HYDROCORTISONE (COMPOUND F)
**TRADEMARK FOR THE UPJOHN BRAND OF 9-ALPHA-FLUOROHYDROCORTISONE

The Upjohn Company, Kalamazoo, Michigan

What enriched bread is doing for America today



Enriched bread, representing the bulk of bread consumed today, makes significant nutrient contributions to the dietary and to the nutritional health of the American people.[1] Bread cannot be regarded merely as an energy food. Instead, it is an important purveyor of many nutrients which a large proportion of our population would never receive in adequate amounts if enriched bread were not available on so large and wide a scale.[2] Here is what modern day enriched bread provides:

VITAMINS: Containing specified amounts of thiamine, riboflavin, and niacin, enriched bread makes a significant contribution to the satisfaction of these vitamin requirements. Enriched bread has played an important role in virtually eliminating frank deficiency diseases and materially reducing subclinical deficiency states resulting from dietary inadequacies in these essentials.[2]

MINERALS: By providing substantial amounts of calcium[3] and of added iron, modern enriched bread goes far in satisfying the needs for these substances. For example, six ounces of bread on the average provides approximately 15 per cent of the day's recommended calcium allowance for adults and 38 per cent of the iron allowance.

PROTEIN: The protein of commercial bread is of high biologic value because it is a mixture of wheat flour protein and milk protein, the latter derived from added nonfat milk solids.[4] One pound of enriched bread furnishes about 39 Gm. of protein.

ECONOMY: At its present day low price, bread represents an outstanding nutritional "buy." It provides not only generous amounts of essential nutrients, but also readily available food energy. These features truly make enriched bread one of America's *basic foods.*

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

REFERENCES

1. Sebrell, W. H., Jr.: Trends and Needs in Nutrition, J.A.M.A. *152*:42 (May 2) 1953.
2. Flour and Bread Enrichment, 1949-50: Prepared by The Committee on Cereals, Food and Nutrition Board, National Research Council, 1950.
3. Data furnished by the Laboratories of the American Institute of Baking, Chicago, Illinois.
4. Sherman, H. C.: Chemistry of Food and Nutrition, ed. 8. New York, The Macmillan Company, 1952, pp. 212; 597-600; 646.

THE VIRGINIA BAKERS COUNCIL
In co-operation with
THE AMERICAN BAKERS ASSOCIATION

THE NEW YORK POLYCLINIC
MEDICAL SCHOOL AND HOSPITAL

(Organized 1881)

(The Pioneer Post-Graduate Medical Institution in America)

GENERAL and SPECIAL COURSES in MEDICINE, SURGERY, and ALLIED SUBJECTS

OBSTETRICS and GYNECOLOGY

A two months full time course. In Obstetrics: lectures, prenatal clinics; attending normal and operative deliveries; detailed instruction in operative obstetrics (manikin). X-ray diagnosis in obstetrics and gynecology. Care of the newborn. In Gynecology: lectures; touch clinics; witnessing operations; examination of patients pre-operatively; follow-up in wards post-operatively. Obstetrical and gynecological pathology. Culdoscopy. Studies in Sterility. Anesthesiology. Attendance at conferences in obstetrics and gynecology. Operative gynecology on the cadaver.

UROLOGY

A combined full-time course in Urology, covering an academic year (8 months). It comprises instruction in pharmacology; physiology; embryology; biochemistry; bacteriology and pathology; practical work in surgical anatomy and urological operative procedures on the cadaver; regional and general anesthesia (cadaver); office gynecology; proctological diagnosis; the use of the ophthalmoscope; physical diagnosis; roentgenological interpretation; electrocardiographic interpretation; dermatology and syphilology; neurology; physical medicine; continuous instruction in cystoendoscopic diagnosis and operative instrumental manipulation; operative surgical clinics; demonstrations in the operative instrumental management of bladder tumors and other vesical lesions as well as endoscopic prostatic resection; attendance at departmental and general conferences.

PROCTOLOGY AND GASTROENTEROLOGY

A combined course comprising attendance at clinics and lectures; instruction in examination, diagnosis and treatment; pathology, radiology, anatomy, operative proctology on the cadaver, anesthesiology, witnessing of operations, examination of patients preoperatively and postoperatively in the wards and clinics; attendance at departmental and general conferences.

For Information concerning these and other Courses please Address:

THE DEAN, 345 West 50th St., New York 19. N. Y.

Complete
Printing and Binding Service

Commercial, Book and Job Work, Catalogues—Publications
Advertising Literature, Booklets—Broadsides
Office and Factory Forms
Loose-Leaf and Manifold Forms—Ledger Leaves and Loose-Leaf Binders
Paper Ruling
Complete Binding Equipment

Complete Service Under One Roof

Acquaint us with your requirements. We serve you efficiently and economically.

Dial 3-1881

WILLIAMS PRINTING CO.

11-13-15 North Fourteenth Street **RICHMOND, VIRGINIA**

itching,

scaling,

burning

keep returning?



your patient needs

SELSUN®

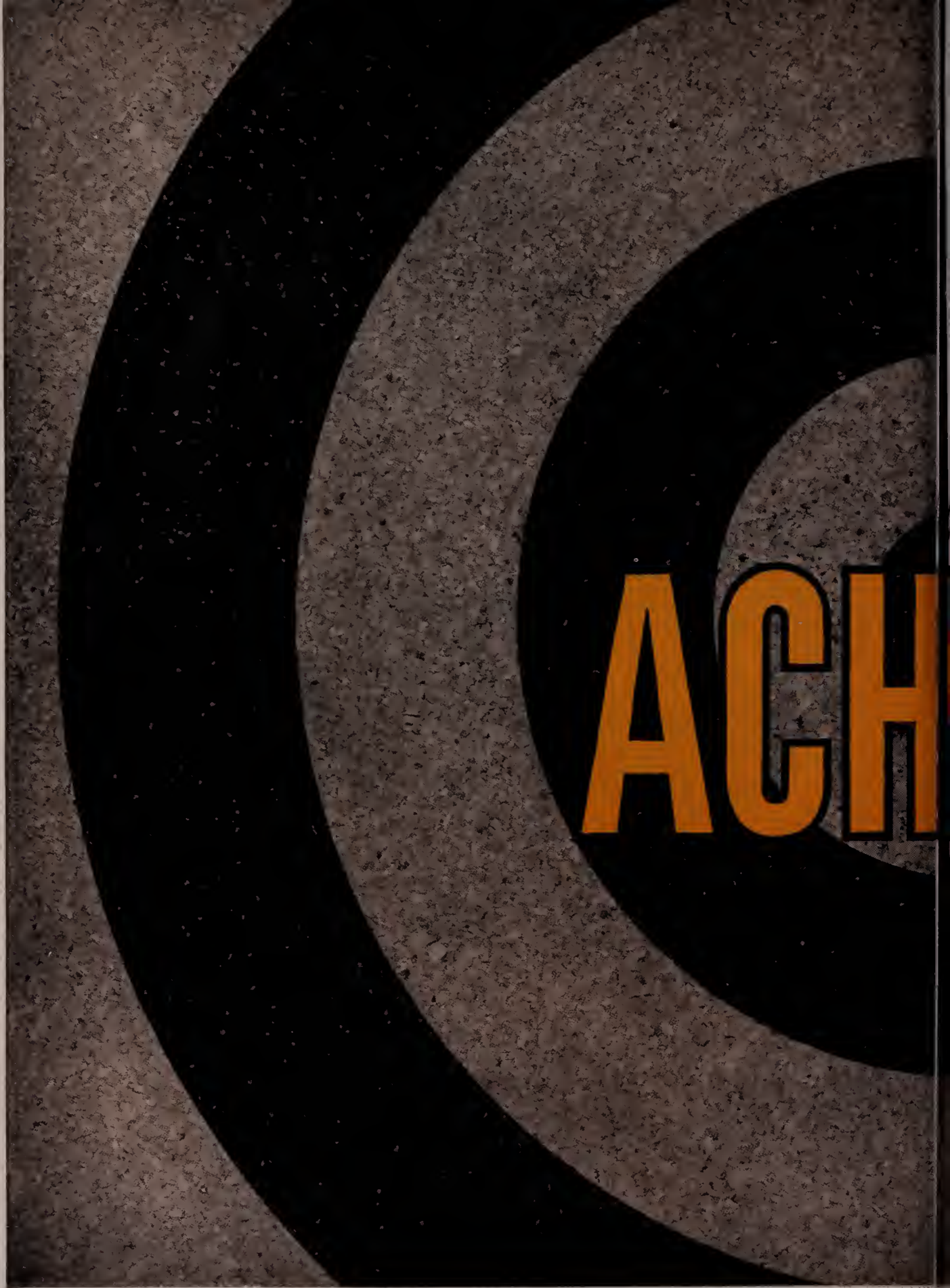


SELSUN acts quickly to relieve seborrheic dermatitis of the scalp. Itching and burning symptoms disappear with just two or three applications — scaling is controlled with just six or eight applications. And SELSUN is effective in 81 to 87 per cent of all seborrheic dermatitis cases, 92 to 95 per cent of dandruff cases. Easy to use, SELSUN is applied and rinsed out while washing the hair. Takes little time, no messy ointments or involved procedures. Prescribe the 4-fluidounce bottle for all your seborrheic dermatitis patients. Complete directions are on label. Abbott



®SELSUN *Sulfide Suspension/Selenium Sulfide, Abbott*

502055


ACH



ACHROMYCIN has proved effective against:

Pharyngitis
Acute Bronchitis
Tonsillitis
Pertussis
Otitis Media
Scarlet Fever
Osteomyelitis
Epidermal Abscesses
Acute Brucellosis
Pancreatic Fibrosis
Typhus Fever
Sinusitis
Gonorrhea
Bacillary Dysentery
Pneumonia with or without Bacteremia
Bronchopulmonary Infection
Acute Pyelonephritis
Chronic Pyelonephritis
Mixed Bacterial Infections
Soft Tissue Infections
Staphylococcal Septicemia
Pneumonoccal Septicemia
Urogenital Tract Infections
Acute Extraintestinal Amebic Infections
Intestinal Amebic Infections
Subacute Bacterial Endocarditis

ROMYCIN*

HYDROCHLORIDE
Tetracycline HCl *Lederle*

A TRULY BROAD-SPECTRUM ANTIBIOTIC

Clinical research has proved ACHROMYCIN to be effective against more than a score of different infections, including those caused by Gram-positive and Gram-negative bacteria, rickettsia, certain viruses and protozoa.

In addition to its true broad-spectrum activity, ACHROMYCIN provides more rapid diffusion than certain other antibiotics, prompt control of infection, and the distinct advantage of being well tolerated by most persons, young and old alike.

ACHROMYCIN, in its many forms, was accepted by the medical profession in an amazingly short time. Each day more and more prescriptions for ACHROMYCIN are being written when a broad-spectrum antibiotic is indicated.

Lederle LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* Pearl River, New York

*REG. U.S. PAT. OFF.

agents of choice

for the treatment of ***pneumonia***
and other respiratory tract infections

Terramycin®

BRAND OF OXYTETRACYCLINE

For (ESTABLISHED) broad-spectrum antibiotic therapy—supplied in convenient Capsules, Tablets (sugar coated), Oral Suspension (raspberry flavored), Pediatric Drops (raspberry flavored), Intramuscular, Intravenous and Ophthalmic Ointment.

Tetracyn®

BRAND OF TETRACYCLINE

For the (NEWEST) broad-spectrum antibiotic therapy—supplied in convenient Capsules, Tablets (sugar coated), Oral Suspension (chocolate flavored), Pediatric Drops (banana flavored), Intravenous and Ophthalmic Ointment.

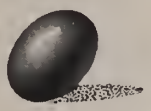
Both discovered by Pfizer *world's largest producer of antibiotics*

PFIZER LABORATORIES, Brooklyn 6, N. Y.
Division, Chas. Pfizer & Co., Inc.

New

Pharmaceutical Elegance

FOR A STANDARD SEDATIVE



LUMINAL®
OVOIDS

Distinctive · Sugar Coated · Oval Shaped

Easy Color Identification of Dosage Strength

¼ grain  (yellow)

½ grain  (light green)

1½ grains  (dark green)

Bottles of 100 and 1000

LUMINAL: Pioneer Brand of Phenobarbital

Over 30 Years of Manufacturing and Clinical Experience

Winthrop-Stearns INC.

NEW YORK 18, N. Y. WINDSOR, ONT.

The American Way

is peace, prosperity, and goodwill toward our fellow man—to invest our time in educating and learning; and our money in good citizens and fine institutions.



One of the finest institutions of your State is Richmond Hotels Incorporated, one that maintains the highest modern hotel standards . . . one that combines the hospitality and charm of the old and the convenience and comfort of the new.

John Marshall *William Byrd*
King Carter *Richmond*

Richmond Hotels Incorporated

today's health a must!

for your reception room



Physicians' Half-Price Rates

4 years	$4.00
3 years	3.25
1 year	1.50

AMERICAN MEDICAL ASSOCIATION
535 North Dearborn · Chicago 10, Illinois

Relax the best way ... pause for Coke



Time out for refreshment

DRINK Coca-Cola
REG. U.S. PAT. OFF.



PENICILLIN PLUS!

Oral BICILLIN is a penicillin of choice because it is synonymous with plus factors in penicillin therapy. It means assured penicillin absorption through its unique resistance to gastric destruction.[1] It means more prolonged action than soluble penicillins achieve.[1] It means penicillin *plus* delicious taste (Oral Suspension), *plus* convenience of administration (Tablets), *plus* the notable safety of penicillin by mouth.

For *all* these plus factors, prescribe Oral BICILLIN.

1. American Medical Association: New and Nonofficial Remedies. J. B. Lippincott Co., Philadelphia, 1954, p. 147.

TABLETS SUSPENSION

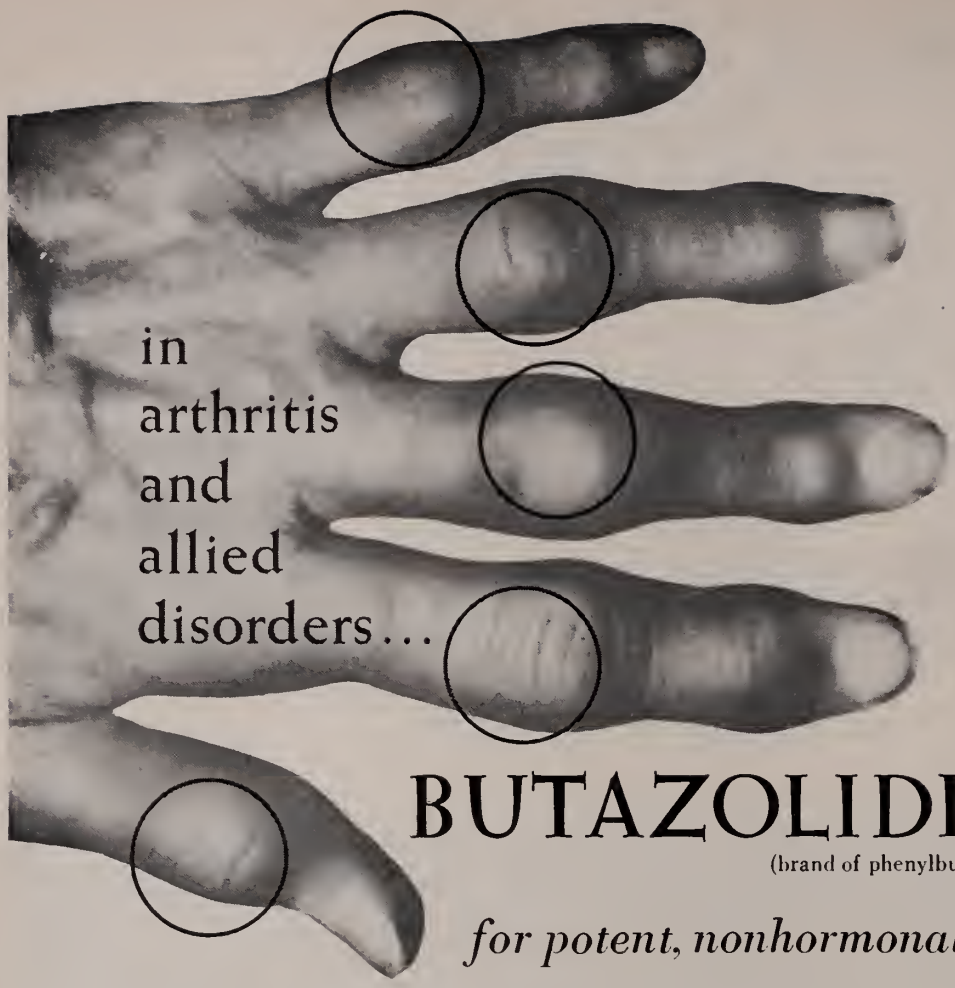
ORAL BICILLIN®

Wyeth®
Philadelphia 2, Pa.

Benzathine Penicillin G (Dibenzylethylenediamine Dipenicillin G)

Penicillin with a Surety Factor





BUTAZOLIDIN®

(brand of phenylbutazone)

for potent, nonhormonal therapy

The anti-arthritic potency of BUTAZOLIDIN is well substantiated by recent clinical reports. In peripheral rheumatoid arthritis, for example, BUTAZOLIDIN produced "major improvement" in 42.9 per cent of the patients studied; in rheumatoid spondylitis "major improvement" in 80 per cent; and in gout 90.9 per cent demonstrated "marked improvement" or "complete remission of symptoms and signs within 48 hours."*

BUTAZOLIDIN being a potent agent, the physician should carefully select candidates for treatment and promptly adjust dosage to the minimal individual requirement. Patients should be regularly examined during treatment, and the drug discontinued should side reactions develop.

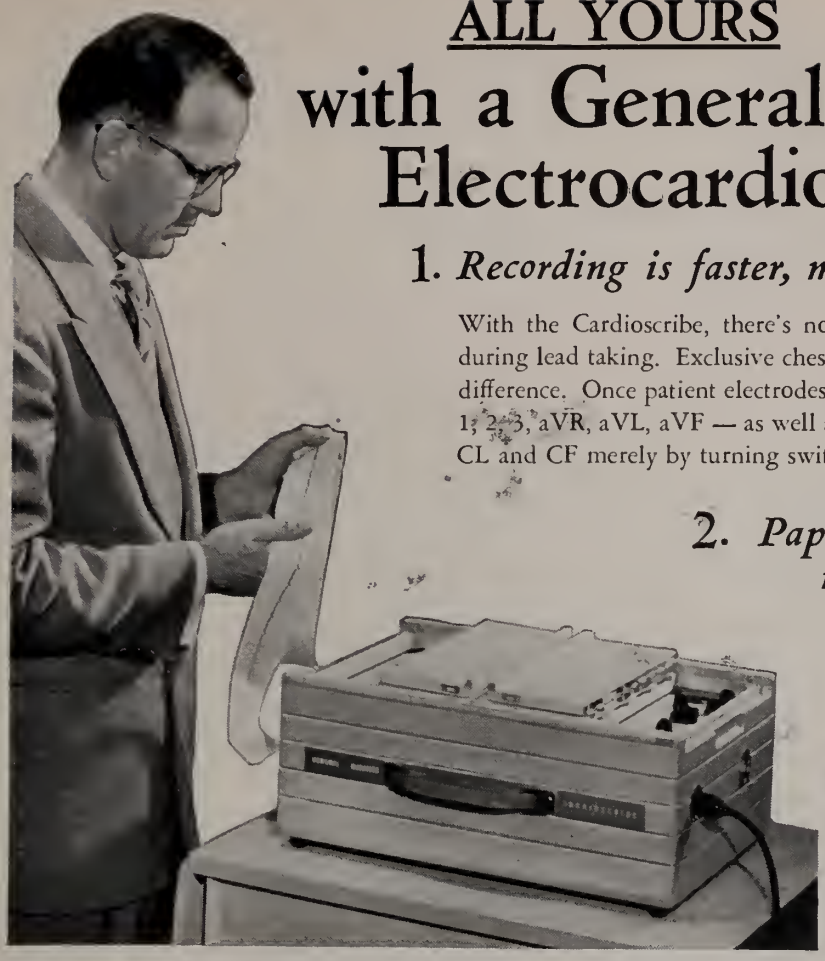
Detailed literature on request.

*MacKnight, J. C.; Irby, R., and Toone, E. C., Jr.: Geriatrics 9:111 (Mar.) 1954.

BUTAZOLIDIN® (brand of phenylbutazone): Red coated tablets of 100 mg.

GEIGY PHARMACEUTICALS
Division of Geigy Chemical Corporation
220 Church Street, New York 13, N.Y.
In Canada: Geigy Pharmaceuticals, Montreal 423

ALL YOURS
with a General Electric Electrocardiograph



1. *Recording is faster, much simpler*

With the Cardioscribe, there's no more fussing with electrodes during lead taking. Exclusive chest lead selector switch makes the difference. Once patient electrodes are in place, you can take leads 1, 2, 3, aVR, aVL, aVF — as well as the 1 to 6 positions at V, CR, CL and CF merely by turning switches.

2. *Paper loading is easier, more accurate*

You'll welcome the advantages built into General Electric's new paper drive. Extremely accurate, it lets you load in the open . . . in seconds! No fumbling inside the case . . . nothing to disassemble. Just flip open the hinged door, pull out the paper drive, load, and snap back into place.

3. *Cabinet offers extra convenience, safety*

Here's truly functional design! The Cardioscribe is a flat, easily handled package. Control covers open wide at a touch . . . no clumsy catches or locks! No groping for controls! Every dial easily accessible. Its leather handle is attached to the main case. When carried, weight is close to your body . . . just like an overnight bag.

Another distinct Cardioscribe advantage: famous General Electric service from over 70 district and local offices. For full details on the DWB Cardioscribe, call your G-E representative.



Progress Is Our Most Important Product

GENERAL ELECTRIC

Direct Factory Branches:

RICHMOND — 1-D East Grace Street **ROANOKE — 202 S. Jefferson Street**
BALTIMORE — 2 W. Eager Street **WASHINGTON, D. C. — 806 15th St., N.W.**
NORFOLK — 218 Flatiron Building

HydroCortone®

(HYDROCORTISONE, MERCK)

A valuable aid in rehabilitating the arthritic patient

MAJOR ADVANTAGES: Greater anti-rheumatic activity than cortisone; smaller doses produce clinical improvement faster and more uniformly.[1]



HYDROCORTONE is a practical long-term therapeutic measure in the majority of patients suffering from rheumatoid arthritis. The use of small doses of HYDROCORTONE in conjunction with conservative general measures will permit the safe management of these arthritics for prolonged periods of time. Such a program has been shown to provide moderate to great relief in a very high percentage of patients.[2] In severely handicapped people, HYDROCORTONE plus physical therapy will frequently allow the rehabilitation of arthritics who would not be helped appreciably by either measure alone.[3]

OTHER INDICATIONS: Still's Disease, rheumatoid spondylitis, psoriatic arthritis, traumatic arthritis, osteoarthritis, and bursitis.

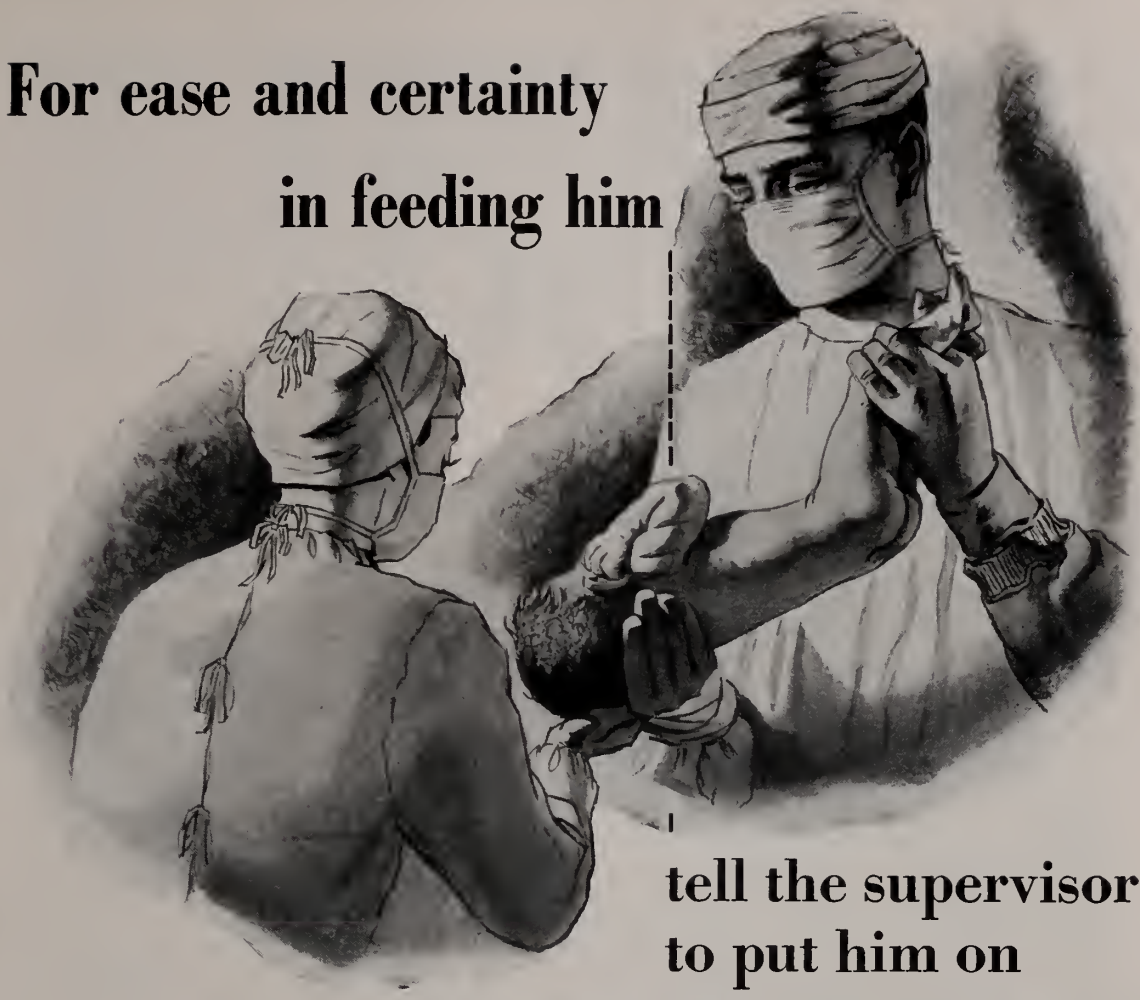
SUPPLIED: ORAL—HYDROCORTONE Tablets: 20 mg., bottles of 25, 100, and 500 tablets; 10 mg., bottles of 50, 100, and 500 tablets; 5 mg , bottles of 50 tablets. **INTRASYNOVIAL**—Saline Suspension HYDROCORTONE-T.B.A.: 25 mg./cc., vials of 5 cc. Saline Suspension HYDROCORTONE Acetate: 25 mg./cc., vials of 5 cc.

SHARP & DOHME

PHILADELPHIA 1, PA.
DIVISION OF MERCK & CO., INC.

REFERENCES: 1. Boland, E. W. and Headley, N. E., *J.A.M.A.* **148**:981, March 22, 1952. 2. Ward, L. E., Polley, H. F., Slocumb, C. H. and Hench, P. S., *J.A.M.A.* **152**:119, May 9, 1953. 3. Snow, W. B. and Coss, J. A., *N.Y. State J. Med.* **52**:319, Feb. 1, 1952.

For ease and certainty in feeding him



tell the supervisor to put him on

"BAKER'S MODIFIED MILK"

Suitable for all infant feeding from birth to the end of the first year, Baker's Modified Milk is a time-saver for busy physicians and hospitals. With Baker's, there's hardly any chance of error —simply dilute to prescribed strength* with water, previously boiled.

Baker's Modified Milk is supplied gratis to hospitals and is available in your hospital.

THE BAKER LABORATORIES INC.

Milk Products Exclusively for the Medical Profession

MAIN OFFICE: CLEVELAND 3, OHIO

PLANT: EAST TROY, WISCONSIN

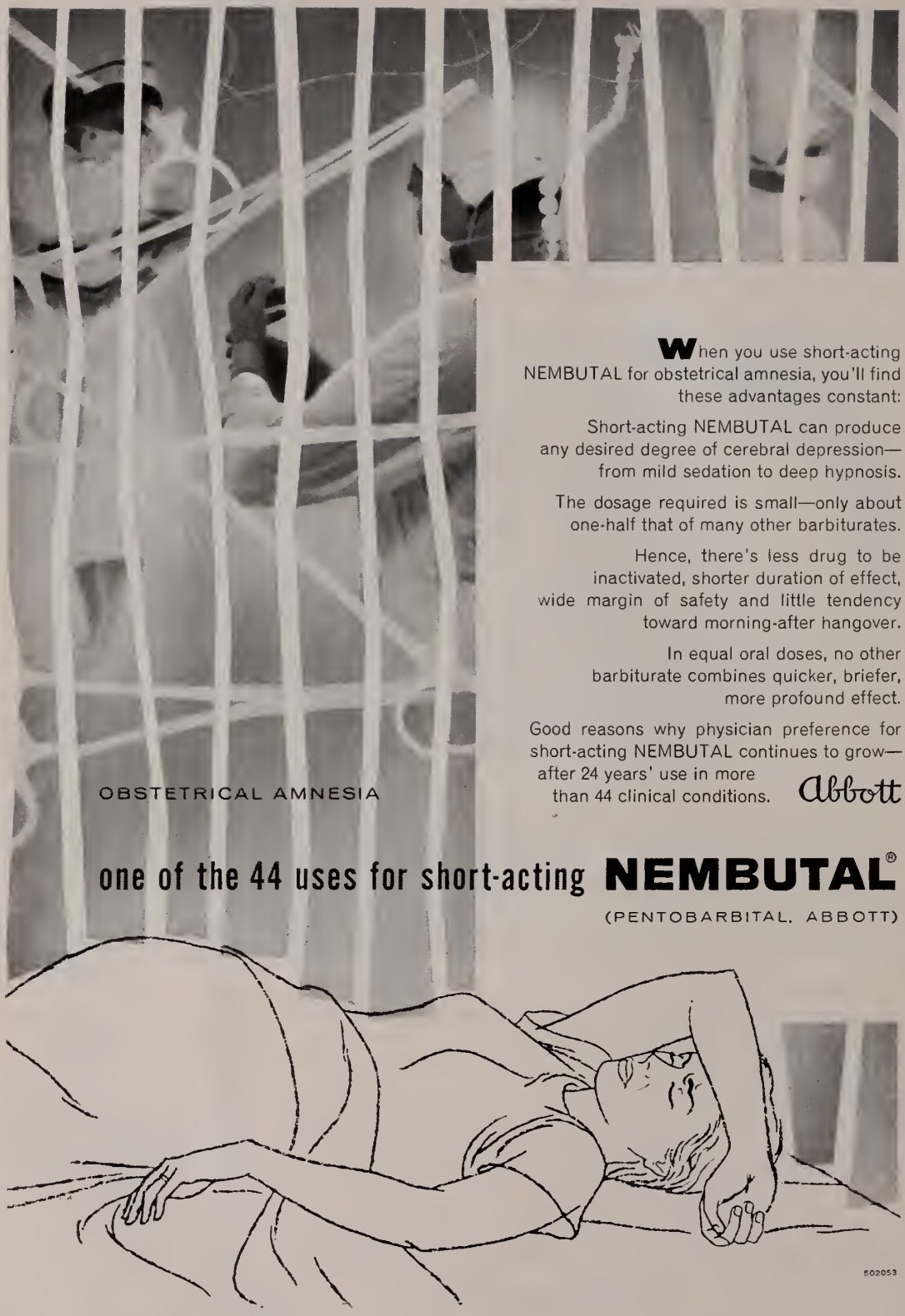


BAKER'S MODIFIED MILK

Made from grade A milk (U. S. Public Health Service Milk Code) which has been modified by replacement of the milk fat with vegetable and animal fats and by the addition of carbohydrates, vitamins, and iron.

*FEEDING DIRECTIONS		
	Baker's	Boiled Water
First 5 days of life	1 part	2 parts
Second 5 days	1 part	1½ parts
After 10th day	1 part	1 part

ACCEPTED COUNCIL ON FOODS AND NUTRITION OF THE AMERICAN MEDICAL ASSOCIATION



When you use short-acting NEMBUTAL for obstetrical amnesia, you'll find these advantages constant:

Short-acting NEMBUTAL can produce any desired degree of cerebral depression—from mild sedation to deep hypnosis.

The dosage required is small—only about one-half that of many other barbiturates.

Hence, there's less drug to be inactivated, shorter duration of effect, wide margin of safety and little tendency toward morning-after hangover.

In equal oral doses, no other barbiturate combines quicker, briefer, more profound effect.

Good reasons why physician preference for short-acting NEMBUTAL continues to grow—after 24 years' use in more than 44 clinical conditions.

Abbott

OBSTETRICAL AMNESIA

one of the 44 uses for short-acting **NEMBUTAL®**

(PENTOBARBITAL, ABBOTT)

502053

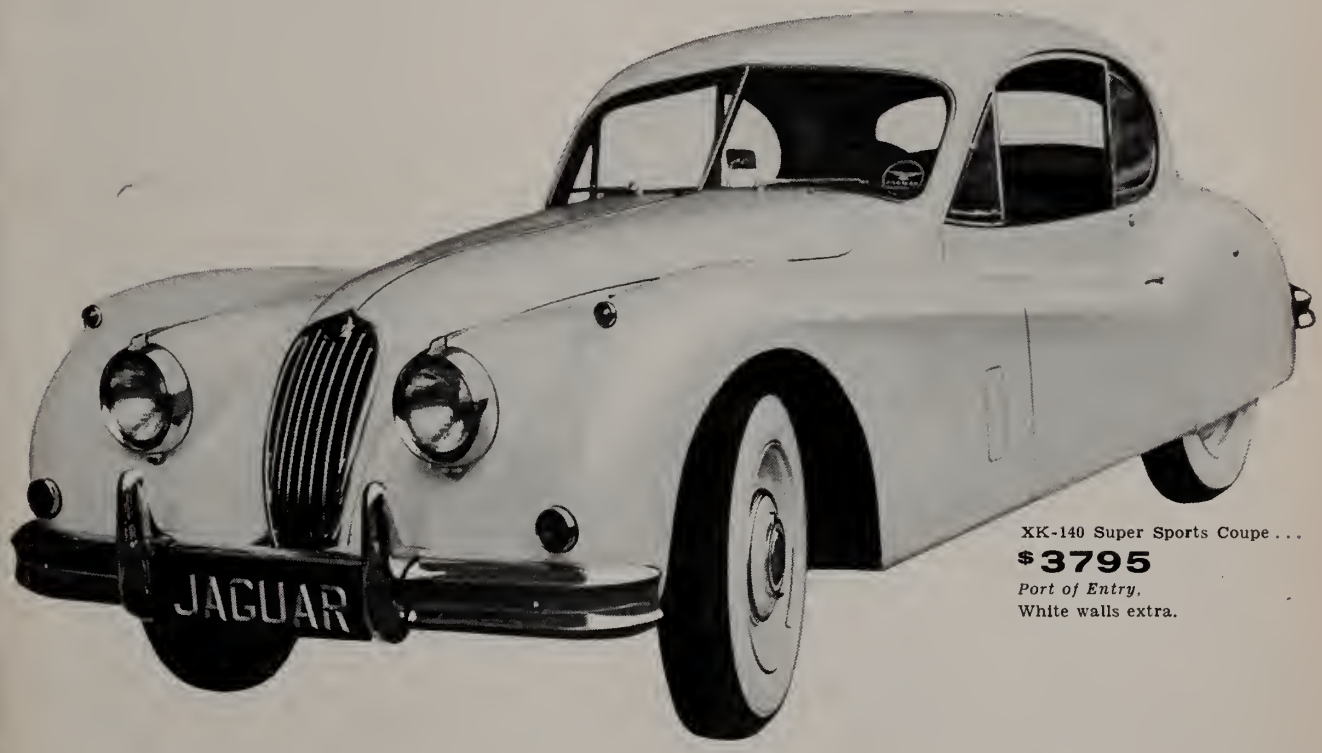
The very attributes that make Jaguar the world's foremost sports car make it particularly suitable to *your* exacting profession.

The speed that brought Jaguar home a winner in over 46 major races . . . for your emergency calls. Maneuverability . . . that weaves you through the worst traffic. Oversize racing brakes . . . for quick stops and safety under all conditions. Dependability . . . so necessary in your active practice.

For instance, a Jaguar hard top coupe was driven 7 continuous days and nights . . . 16,851 non-stop miles . . . at over 100 m.p.h. No other car ever ran so far— so fast. Yet after this unparalleled test, technicians found it would have passed new car inspection!

just what the doctor ordered!

The new Jaguar coupe . . . with its quiet good looks, world renowned XK-140 engine and very much enlarged space behind the front seat . . . is truly Rx for *you!* Arrange for a demonstration today!



XK-140 Super Sports Coupe . . .
$3795
Port of Entry,
White walls extra.

JAGUAR

the finest car of its class in the world

ARPER MOTORS, INC.
1 Preston Avenue
HARLOTTESVILLE, VA.
I. 28191

FOREIGN CAR DIST. INC.
806 Granby Street
NORFOLK, VA.
Tel. 40663

TRANS-PORT SALES & SERVICE, INC.
1010 N. Boulevard
RICHMOND, VA.
Tel. 51775

IMPERIAL MOTORS OF FAIRFAX
Route 29
Nr. FALLS CHURCH, VA.
Tel. Jefferson 13302

IMPERIAL CAR DISTRIBUTORS, INC., Academy and Washington, HAMPTON, VA. Tel. 4382

when hormones

are preferred therapy...

SCHERING HORMONES

assure superior quality

Schering's high standards and quality control assure products of unchanging potency and purity for uniform action and clinical efficacy.

minimal cost

Manufacturing know-how and continuing research by Schering provide preparations of highest quality at minimum cost.



menopause

needn't mean

"change of life"



ESTINYL,® brand of ethinyl estradiol



Most acute bacterial respiratory infections you encounter respond readily to 'Ilotycin.'

'Ilotycin' kills susceptible pathogens of the respiratory tract. Therefore, the response is decisive and quick. Bacterial complications such as otitis media, chronic tonsillitis, and pyelitis are less likely to occur.

Most pathogens of the respiratory tract are rapidly destroyed. Yet, because the coliform bacilli are highly insensitive, the bacterial balance of the intestine is seldom disturbed.

'Ilotycin' is notably safe and well tolerated. Urticaria, hives, and anaphylactic reactions have not been reported in the literature.

Staphylococcus enteritis, avitaminosis, and moniliasis have not been encountered.

Gastro-intestinal hypermotility is not observed in bed patients and is seen in only a small percentage of ambulant patients.

Available as specially coated tablets and pediatric suspensions.

Lilly

QUALITY / RESEARCH / INTEGRITY

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U.S.A.

The Virginia
MEDICAL
MONTHLY

February, 1955
Vol. 82, No. 2
Whole No. 1232

Introduction to Asthma Conference

OSCAR SWINEFORD, JR., M.D.
Charlottesville, Virginia

THIS Symposium on Asthma is the ninth of a series of Post-Graduate Conferences which have been held at the University of Virginia School of Medicine for the practicing physicians of Virginia during the past three years. This issue of the Virginia Medical Monthly is devoted to the edited recordings of that symposium. This is an innovation both for the Monthly and for the Post-Graduate Conferences. The participants are entitled to the heartiest of thanks for their effective, cheerful, and punctual co-operation, without which neither the Conference nor this record of the proceedings would have been possible.

Historical. The term asthma was coined by Hippocrates about 450 B. C. Aretaeus described the asthma paroxysm in the first century A.D. Laennec in 1819 suggested that asthma was due to bronchial spasm. Salter wrote his now famous book on asthma in 1863. Blackley demonstrated the role of pollen in seasonal hay fever and asthma in 1873. Koch reported the tuberculin reaction in 1891. Richet coined the term and studied the phenomenon of anaphylaxis at the turn of the century. Arthus described the phenomenon which bears his name in 1903. These are but a few of the milestones in the history of asthma. In the past 40 years there have been innumerable additions to the framework which these milestones provided. It is from these that the subject matter of this symposium has been accumulated.

Prevalence. Asthma and its first cousin, hay fever, were third in the 1938 Public Health Service Bulletin on the prevalence of chronic diseases, with 3,500,000 victims. Cardiovascular diseases led the list with an incidence of 7,500,000. The rheumatic diseases were a close second with nearly 7,000,000.

Asthma was diagnosed 3,779 times in this institution in a recent 5-year period. No other important diagnosis was recorded as often. Asthmatics flock to any place where "a friend of a friend of a friend" has gotten relief. This is a deplorable situation. Why should it exist? In 1932, in the Virginia Medical Monthly, I wrote "the average physician should be able to diagnose and treat the allergic diseases with the same facility and confidence with which he diagnoses and treats other diseases of the cardio-respiratory, genito-urinary, gastro-intestinal, neuro-muscular, and muco-cutaneous systems." In 1953, again in the Monthly, I wrote "this extensive experience has led to the reluctant conclusion that the average physician of today manages asthma far less effectively than it was hoped he would 20 years ago." Why is this true? Certainly it is not the fault of the physician. It is directly attributable, I think, to the failure of the curriculum committees of the medical schools to take a realistic attitude towards this problem. Certainly the allergic diseases, which affect between 5%-10% of our population, deserve more than the proverbial "lick and a promise" with which they are presented to the student and intern.

Definition. What is asthma? We define it as wheezy breathing. If people don't wheeze, they don't have asthma. In very mild asthma there may be wheezing but no dyspnea. The wheezing may be heard only by auscultation. In an attack of asthma the forces which cause wheezing are intensified, adding dyspnea to the wheezing. Attacks of asthma are

OSCAR SWINEFORD, JR., M.D., *Professor of Internal Medicine, University of Virginia, and Director of the Allergy-Arthritis Division of The Department of Internal Medicine.*

apt to be isolated in the beginning. But as time passes they tend to become more frequent and, ultimately, in many instances, some degree of wheezing becomes more or less constant. Next to wheezing and shortness of breath, cough is perhaps the third most characteristic feature. It will be discussed in some detail later. It will be emphasized that asthma is a syndrome, not a disease, and that the attacks can be caused by other things than the allergic reaction. Causes other than immunological reactions seem to play some part, usually minor, in the majority of cases. The term *bronchial* asthma is redundant and serves no purpose. All asthma is bronchial. No other organ wheezes, although some are quite noisy.

Scope of the Conference. Nothing but asthma will be discussed. The topics listed in the program have been selected arbitrarily. Discussions of prognosis, uncommon forms of asthma, and controversial topics have been omitted because time and space are limited. The program is divided into two parts. In one, emphasis is put on the mechanisms which cause wheezing. The second part is devoted to practical discussions of the principles of diagnosis and treatment of the asthmatic.

Since these proceedings are the edited transcripts of informal discussions, no effort has been made to document references to support individual statements. Each participant will be glad to supply references to any topic which the reader may wish to pursue further.

The papers are presented in the order in which they appear in the program, which is as follows.

CONFERENCE ON ALLERGY
UNIVERSITY OF VIRGINIA—
JANUARY 22, 1954
PROGRAM

INTRODUCTION—IMPORTANCE—DEFINITION

Oscar Swineford, Jr., M.D., Charlottesville.

BASIC PRINCIPLES

Pathology and Abnormal Physiology—John L. Guerrant, M.D., Charlottesville.

Immunology—Oscar Swineford, Jr., M.D., Charlottesville.

Psychogenic Asthma, Mechanisms—Richard W. Garnett, M.D., Charlottesville.

PRINCIPLES OF MANAGEMENT

Classification and Etiologic Diagnosis—Oscar Swineford, Jr., M.D., Charlottesville.

Symptomatic Treatment—Wyndham B. Blanton, M.D., Richmond.

Management of Nose, Throat, and Sinus Disease in Asthma—G. Slaughter Fitz-Hugh, M.D., Charlottesville.

Treatment of Atopic Asthma—John L. Guerrant, M.D., Charlottesville.

The Psychotherapeutic Approach—Richard W. Garnett, Jr., M.D., Charlottesville.

Treatment of Infectious Asthma—Oscar Swineford, Jr., M.D., Charlottesville.

Management of Asthma in Childhood—Susan Dees, M.D., Durham, North Carolina.

Aspiration of Secretions—George R. Minor, M.D., Charlottesville.

CLOSING PANEL

An enemy is someone you enjoy having nothing to do with; a companion is someone you enjoy doing something with; a friend is someone you enjoy doing nothing with.

Happiness is that sensation you acquire when you are too busy to be miserable.

Many a person would reach greater heights if he had greater depth.

—*Selected*

Pathology and Abnormal Physiology in Asthma

JOHN L. GUERRANT, M.D.
Charlottesville, Virginia

INTRODUCTION: When we see a patient with asthma, the first thing we notice is the fact that he is dyspneic. He is having difficulty getting air into his chest and even more difficulty getting it out. When we listen we can hear a wheeze. These gross observations suggest that there is incomplete respiratory obstruction. The obstruction is obviously not complete because the individual is getting some air in and out. The high pitched wheeze that we hear throughout the chest suggests that the obstruction is in numerous small bronchi or bronchioles instead of in the trachea and major bronchi.

It would be interesting to remove the lung from this person with asthma, give it to the pathologist, and have him describe for us the changes that have caused the difficult breathing. Since we can't do this, we will have to either produce anaphylaxis with its asthma-like manifestations in an animal and have the pathologist study the animal's lungs, or we will have to have him study the lungs from an individual who dies with asthma. Both of these studies have been done many times and from them we have a good understanding of the pathology of fatal asthma.

Information acquired in this way is very interesting, but it may not explain the difficult breathing that we see so often in patients with asthma. In the first place, anaphylaxis in animals is not the same as asthma in man, and, in the second place, there seem to be important differences between the common attacks of asthma and those from which people die. Perhaps if we want to understand why the individual with asthma is short of breath we should turn to the physiologist and ask him to study the living patient. He should be able to throw some light on the causes of respiratory tract obstruction. Certainly he can describe some of the changes resulting from the obstruction.

Pathology: Let us consider first the changes seen in the lungs of a guinea pig dying of acute anaphylaxis. They are greatly distended and when removed from the thorax do not collapse. There is increased moisture, as manifested by dripping of serosanguineous fluid from the cut surface. Microscopic study reveals emphysematous distention of the alveoli, engorgement of the capillaries, and accumulation of red cells. There is some edema in the walls of the larger bronchi. In guinea pigs that have less severe anaphylaxis and more prolonged shock, the lungs are not so enlarged and may be contracted at times. There are patches of hemorrhage on the surface. Microscopic studies shows atelectasis instead of emphysema. There is severe edema in the bronchial walls. There is a patchy infiltration of the alveolar walls, and in some lungs the alveoli contain an exudate rich in eosinophils. Even in experimental anaphylaxis the pathology is not constant.

Patients dying with asthma present a fairly characteristic appearance. On opening the chest the lungs are seen to be over-distended often with localized areas of atelectasis. The distention seems to be due to actual obstruction in the bronchi or bronchioles. Even if the major bronchi are open, one still can't collapse the lung by pressure. A look at the bronchi often shows the cause of this obstruction. Whether large or small they are seen to be tightly filled with thick mucoid or muco-purulent secretions. Microscopic study often shows thickened bronchial walls. The basal membrane may be hyalinized and the wall may be infiltrated with plasma cells, lymphocytes, and eosinophils. The alveoli are emphysematous often with stretched or broken walls. Pneumonia is often present. Hyperplasia and hyperactivity of the mucous glands is often present. Hypertrophy and dilatation of the right side of the heart are seen in perhaps a third of the patients dying with asthma. Occasionally frank right-sided heart failure is present.

The major cause of death in patients dying from asthma seems to be bronchial obstruction caused by thick bronchial secretions. Common associated findings are thickening of the bronchial walls, dilated alveoli, and hypertrophy of the right side of the heart.

Do these same pathological changes occur in the common asthmatics who live on for years and years? Were these the patients that Oliver Wendell Holmes was thinking of when he described asthma as "the

JOHN L. GUERRANT, M.D., *Associate Professor of Internal Medicine, University of Virginia.*

slight ailment that promotes longevity"? I do not know, but I doubt it.

When I study the patients described in various reports on pathology in asthma and when I think of the patients I have known who died from asthma, several characteristics stand out. Most of the patients fall into one of two groups. The first and smaller group consists of patients dying suddenly and unexpectedly from anaphylaxis to a drug, serum, skin test, or allergen injection. The second and larger group is fairly characteristic and is made up of middle aged men who have had asthma for a few years or less. The asthma was almost constant, resistant to all treatment, and without evidence of significant infection or important atopy. Certainly most of our chronic asthmatics do not fall into either of these groups.

Most people believe that the structural changes in allergic asthma consist of edema of the bronchial mucous membrane, over-active mucous glands in the tracheobronchial tree, and spasm and hypertrophy of the bronchial muscle. If infection is present, the mucous membrane edema probably shows more evidence of imflammation and the bronchial secretions are purulent. If asthma has been present for very long, there is also distention of the alveoli; that is emphysema. So far as I know the blood vessels in the lung have not been well studied in asthma. Over-distention of the pulmonary vessels with associated stiffening of the lung could cause many of the symptoms of asthma.

People who die of asthma usually have bronchial obstruction due to thick bronchial secretions plus edema of the bronchial mucous membrane and thickening of the bronchial walls. We believe that people who live with asthma have edema of the bronchial mucous membrane, increased mucoid secretions in the bronchi, and spasm of the bronchial smooth muscle.

Physiological Changes: Numerous physiological observations have been made on patients with asthma. They are listed in the first table.

The lungs are over-distended. This is apparent from the physical examination as well as from the x-ray studies and laboratory studies that show increased residual volume and increased total lung capacity.

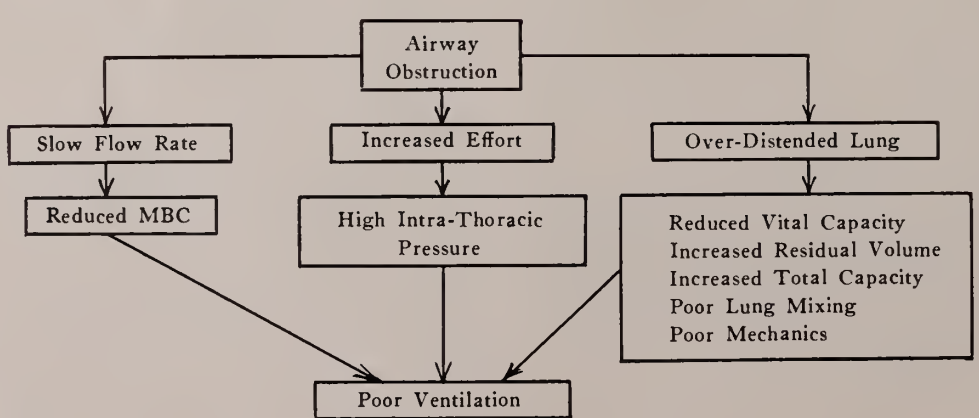
Ventilatory function is reduced. By this we mean that the patient is unable to move the normal amount of air in and out of his lung. Three observations demonstrate the reduced ventilatory function:
(1) The vital capacity is reduced.
(2) There is a reduced rate of air flow. One can measure this with an elaborate recording flow meter, with a recording spirometer that has fast-moving paper, or by simply observing how long it takes the patient to make a full inspiration and expiration.
(3) The maximum breathing capacity is reduced.

Table 1:
Physiological Changes in Asthma

1. Over-Distended Lung.
2. Reduced Vital Capacity.
3. Reduced Rate of Air Flow.
4. Reduced Maximum Breathing Capacity.
5. Poor Intra-Pulmonary Mixing.
6. Increased Changes in Intra-Thoracic Pressure.
7. Increased or Decreased Minute Ventilation.
8. Reduced O_2 Up-Take, Reduced Arterial O_2 Saturation, and Increased Arterial CO_2 Content when Severe.

Inspired air is poorly distributed throughout the lung. One can recognize this from the fact that it takes a longer than normal time to wash all of the nitrogen from the lung by oxygen breathing.

Table 2:
Mechanics Leading to Poor Ventilation in Asthma



In asthma the intra-thoracic pressure swings widely. It falls quickly during inspiration and rises well above zero during expiration.

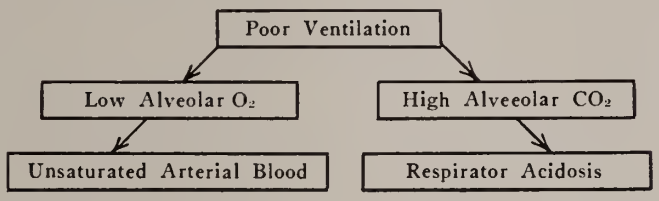
The patient with mild asthma has an increase in resting ventilation. As the asthma becomes more severe, the resting ventilation is less than normal. Along with the reduced ventilation that occurs in a severe asthma attack there is a reduction in the oxygen up-take and the arterial oxygen saturation as well as increased arterial carbon dioxide content. These changes occur only in very severe attacks.

These physiological observations can be explained on the basis of one lesion; that is airway obstruction (Table 2). The obstruction causes a slow flow rate as shown by the reduced maximum breathing capacity. It leads to an increased respiratory effort and as a result the intra-thoracic pressure swings widely from inspiration to expiration. The obstruction also leads to over-distention of the lung with reduced vital capacity, increased residual volume, increased total capacity, and poor respiratory mechanics. When asthma is severe, the over-all effect of these manifestations of airway obstruction is poor alveolar ventilation.

I would like to call your attention particularly to the increased respiratory effort. That is the thing that gives the patient with asthma his symptoms. An increased effort means difficult breathing or dyspnea. So long as the patient with asthma is able to increase his effort enough to adequately ventilate his alveoli he does not get into severe trouble. When the obstruction becomes so severe that his increased effort is not sufficient to ventilate his alveoli adequately he develops hypoxia, accumulates carbon dioxide, and develops respiratory acidosis (Table 3). This occurs only when the asthma is severe.

Treatment of asthma should be directed toward relief of airway obstruction. Since serious hypoxia rarely occurs, oxygen is usually not helpful. In fact, oxygen may be harmful. There is evidence to indicate that oxygen breathing dries bronchial secretions and makes them harder to cough out. Oxygen may cause or aggravate respiratory acidosis in asthma as it does in emphysema. There is a report of one patient with asthma who developed coma on several occasions when given oxygen. Drugs that reduce respiratory effort—that is, respiratory depressants —are dangerous. Morphine is the most dangerous of all.

TABLE 3:
EFFECT OF POOR VENTILATION IN ASTHMA



Clinical Studies Listed.

The U. S. Public Health Service has published a booklet describing approximately 100 clinical studies now under way or contemplated for the fall and winter season of 1954-55 at the Clinical Center of the National Institutes of Health, Bethesda, Maryland.

The booklet gives information on procedures for referral of patients and eligibility requirements. To be admitted, a patient must be referred by a physician, and must manifest a specific condition under study by one of the seven Institutes conducting research at the Clinical Center.

Physicians may obtain a copy of the booklet by writing to the Director of the Clinical Center. Future announcements also will be sent upon request whenever new studies are contemplated.

Immunology of Asthma

OSCAR SWINEFORD, JR., M.D.
Charlottesville, Virginia

INTRODUCTION. Editing this talk has been a difficult task. The subject is a complex one. To present it as a simple topic would be misleading. To present it comprehensively would make for truly laborious reading. In an effort to solve this dilemma, the essential data have been summarized in a series of tables, while the text is made up of a sort of critical review of the subject. It is hoped that this approach will serve as a helpful guide for those who wish to study the subject more extensively, while, at the same time, serving the meat to those who do not wish to wade through the details.

Immunology has long since outgrown its early limited concern with the role of humoral factors in the prevention and control of infection. By the same token, the immunology of asthma has little to do with recovery from or protection against infection. Asthma, and other allergic diseases, are classical examples of the complete perversion of the original beneficent concept of antibodies. It is true that asthma is often mediated by antigen-antibody reactions. But instead of serving as a means of protection against the effects of harmful antigens, the allergic antibody mediates harmful reactions to otherwise harmless antigens; e.g., asthma from milk or feather pillows. Whereas this distorted immune mechanism is the commonest and best understood cause of asthma, it is important to point out that there are other causes of wheezing which will be discussed in another section.

Asthma is one of the classical allergic diseases. What do we mean by allergy? This is a long story. For our purposes, it can be considered as "a state of altered re-activity," by which we mean that the reaction of the allergic individual to the antigens of his environment differs from that of the non-allergic individual. Ordinarily the word "allergy" refers to the mechanism which produces the so-called allergic diseases, such as asthma, hay fever, urticaria, angio-edema, and serum reactions. This is the concept upon which most emphasis will be placed in this discussion. This seems simple enough at first glance. Actually, however, the problem is far from simple. Table I lists nine different types of allergic reactions which have the common background of altered re-activity plus mediation by antigen-antibody reactions. Each type of reaction, however, has its own characteristic features.

Table I
Types of Allergic Reaction

Anaphylaxis	Contact	Serum
Arthus	Atopic	Drug
Tuberculin	"Id"	Collagen

What connection does all of this have with asthma? Asthma *is not* thought to be mediated by the contact, "id", serum, or collagen type of reaction. Asthma *is* mediated typically by the atopic, conventional allergic reaction which has many features in common with anaphylaxis in the guinea pig. Asthma is also precipitated frequently by infection. The mechanism by which infection produces asthma is not well understood. In spite of this, the clinical picture of pure infectious asthma is quite characteristic. There is much to commend the idea that infection produces asthma by the tuberculin type of reaction. This idea has not been confirmed. The Arthus reaction may well play a role in infectious asthma, but too little is known about this phenomenon in man to justify further consideration here. In this clinic, more than half of a large number of chronic asthmatics had evidence of both allergy and infection.

Anaphylaxis. Most of our ideas about the immunology of asthma stem from the early studies of anaphylaxis. A sensitized guinea pig becomes dyspneic when he inhales or is injected with the antigen to which he is sensitive. The expiratory is greater than the inspiratory difficulty. If he doesn't die, he recovers completely in short order. This is the closest experimental analogue of asthma. Other similarities between the immunology of anaphylaxis and asthma as a typical example of clinical allergy are listed in Table II.

The phenomenon *anaphylaxis consists of two stages.* One is the phase of *sensitization,* which is symptomless. The other phase is the *anaphylactic reaction.*

Sensitization. An animal, the guinea pig for example, may be sensitized in two ways: (a) *Actively,* by injecting an antigen against which he makes his own antibodies; (b) *Passively,* by injecting, antibodies which some other animal has made. In

Table II

Similarities Between Anaphylaxis and Clinical Allergy (Atopy)

(1) Reactions highly specific
(2) Reactions mediated by antigen-antibody-tissue cells
(3) Antigen apt to be inherently harmless
(4) Antibodies readily demonstrable
(5) Active sensitization lasting
(6) Passive sensitization possible
(7) Passive sensitization transient
(8) Multiple sensitizations possible
(9) Shock tissues differ
(10) Basic pathology; exudation plus smooth muscle spasm
(11) Hyposensitization possible

either case the autogenous or the foreign antibodies are thought to become attached to cells in several organs, particularly the lungs. Such an animal is said to be hypersensitive or sensitized. This animal is perfectly well until he inhales or is injected with the antigen to which he is sensitive. In this respect the actively sensitized guinea pig is quite analagous to the allergic asthmatic.

Table III

Mechanism of Anaphylactic Reaction

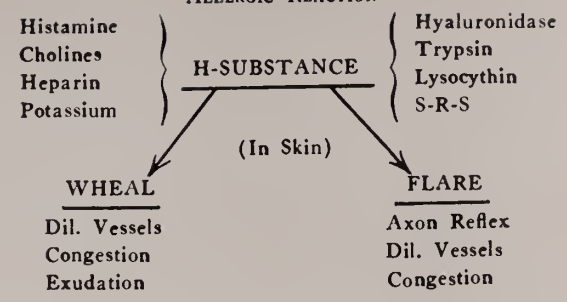
(A) Sensitization
Active
Injected antigen ——→ antibody
Tissue cells fix antibody
Passive
Injected antibody, homologous or heterologous
Tissue cells fix antibody
(B) Reaction—(when antigen is injected or inhaled)

{ Antibody + Tissue cells + Antigen } —H— Substance ——→ Anaphylaxis

The anaphylatic reaction occurs when the guinea pig inhales or is injected with the antigen to which he is sensitive. Table III illustrates this diagramatically. The reaction occurs when the antigen- antibody-tissue cell combination occurs, the so-called allergic or anaphylactic triad. When these three things come together, profound and rapid chemical changes occur, the end-result of which is the release of several pharmacologically active materials, generally referred to as the histamine-like or "H-substance". Histamine has been identified pharmacologically and has been recovered chemically from these reactions. Other substances, listed in Table IV, have also been demonstrated by students of this problem. When the H-substance is released in human skin it elicits the characteristic wheal and flare which characterize the skin-test reactions to foods and inhalants in the clinical laboratory.

Table IV

Allergic Reaction



The Antigen may be of infinite variety. For practical purposes we classify them as foods, inhalants, drugs, or bacteria. It is customary to subclassify inhalants into pollens, epidermals, fungus spores, and domestic or occupational dusts. Anything which infects or is ingested, inhaled, or injected can cause asthma. Fortunately for the patient and the physician the majority of asthmatics are sensitive to things which are an intimate and more or less easily identified part of their daily environment. This will be discussed in more detail by Dr. Guerrant later. As a rule, antigens which cause asthma are proteins. Drugs are exceptions to this rule. The chemical nature of antigens which cause asthma has received scant and inconclusive attention. Antigens which elicit allergic reactions are called allergens.

Table V

Antibodies Concerned with Various Kinds of Allergic Reactions

Reagin	Monovalant
Precipitin	Contact?
Blocking	Tuberculin?
Comp. Fixing	"Id"?

The Antibody. Table V shows that at least eight different types of antibodies are involved in the various forms of allergic reactions. Only reagin, precipitin, and the blocking antibody are germane to this discussion of the immunology of asthma, however. The antibody which mediates the tuberculin reaction is probably germane, but too little is known about it to do more than mention it here.

Strangely enough, investigation of allergic antibodies has been much more active and productive than the study of antigens. Much has been learned, but an infinite number of problems are still unsolved. A somewhat paradoxical situation will illustrate this. *The antibody which mediates the anaphylatic reaction will sensitize* guinea pigs in small doses *and protect* them in large doses. This antibody has for years been considered to be precipitin. Recent experiments, however, *seem* to have separated the sen-

sitizing from the precipitating antibody. Separation of the protecting from the precipitating antibody has not been attempted. The anaphylatic antibody with both sensitizing and protecting functions is produced in response to injections of antigen with great regularity in rabbits. The sensitizing but not the protecting function is produced easily in the guinea pig. The protecting but not the sensitizing function is produced easily in man. These paradoxes need much study.

The antibody situation in asthma seems to be quite different. There are two distinct *antibodies. Reagin,* which mediates the asthmatic reaction and the *blocking* or protecting antibody, which is produced in response to therapeutic antigen injections. Table VI summarizes the essential features of these two antibodies.

TABLE VI

ANTIBODIES IN ALLERGIC (ATOPIC) ASTHMA

REAGINS—SENSITIZING ANTIBODIES

- Arise naturally—hard to produce
- Once present, they last indefinitely
- Sensitize normal tissues transiently
- Allergen + regin ⟿→ immediately positive skin test
- Local desensitization follows reaction with allergen
- Increased early in treatment
- Decreased late in treatment
- Destroyed by 60° C. in one hour
- Highly specific
- Not yet demonstrable in all cases
- Bind very little allergen *in vitro*
- Passive sensitization is transient, weeks
- Do not permeate placenta

BLOCKING—THERMOSTABLE—PROTECTING—NEUTRALIZING ANTIBODIES

- Do not occur naturally
- Readily produced by injecting allergen
- Do not sensitize
- Do not combine with reagin
- Not destroyed by 60° C. in one hour, but are in 24 hours
- Combine with allergen to neutralize it
- i.e., regin + tissue + { allergen + blocking antibody } ⟿→ Reaction / No reaction
- i.e., compete successfully for allergen with reagin
- Combination with allergen transient
- Confer active and passive protection
- Subside when treatment stops
- Return rapidly when treatment resumed
- Diffuse from injected sites within 24 hours
- Do not delay nor prevent sensitization by reagin
- Permeate placenta

Reagin, the Sensitizing Antibody. The essential facts about reagin are summarized in Table VI. One of the most interesting features of this sensitizing antibody is that it arises naturally. There is no known way to produce this antibody predictably. Perhaps the injection of large doses of foreign sera is an exception. When patients are sensitized by injections of antisera, precipitins usually can be demonstrated, a situation closely analogous to anaphylaxis. Perhaps penicillin will provide a more frequent exception to this rule than have the occasional examples of reagin in diabetics receiving insulin or in pernicious anemias receiving liver injections. These are examples of an artificial but unpredictable stimulus to the development of reagin.

Reagin develops insidiously from unrecognized exposures as a rule. However, there are many examples of the development of reaginic asthma from environmental exposures. The first example recognized here was the common experience of prompt relief of asthma when, years ago, kapok was substituted for feather pillows. A significant percentage of these patients developed reagins and, subsequently, asthma from the kapok exposure. Other examples are: the allergic Europeans who develop ragweed hay fever and asthma after being in this country two, three or four years; the farmers who become sensitized to hay and grain dusts; the baker who develops asthma from flour dust; and the furrier who becomes sensitive to a particular type of fur.

Passive transfer of sensitization has been the most practical use of reagin. The intradermal injection of a drop of serum which contains reagin will sensitize normal skin. If the specific antigen, ragweed extract for example, is injected into this site the next day or even ten days later, a typical wheal and flare will result. Allergists call this procedure "passive transfer". This same response will be produced immediately by the injection of a mixture of antigen and reagin-containing serum. No recognized reaction occurs from mixing the antigen and the antibody in the test tube. The reaction occurs when the allergic triad is completed by injecting the mixture into the tissues of the skin. Extensive use has been made of this passive transfer phenomenon, both in diagnosis and research.

In this clinic, passive transfer has been more useful as a research tool than in the identification of causes of asthma. There are definite limitations in the clinical usefulness of passive transfer. One is that positive passive transfer tests are rare when skin tests are negative. Another is that testing the patient's skin directly is much simpler than passive transfer tests. A third is that only a small percentage of positive reactions to direct skin tests are associated with demonstrable reagins.

Reagin persists indefinitely. Once present, there

is no known way to increase it or decrease it. Injecting antigen does not change the reagin titer significantly. Successful treatment with dust or pollen extracts, for example does not reduce the reagin titer. One observer reported disappearance of reagin after several years of treatment with enormous doses of grass pollen extract. This dogged persistance of reagin provides a prime target at which investigators have taken little or no aim to date.

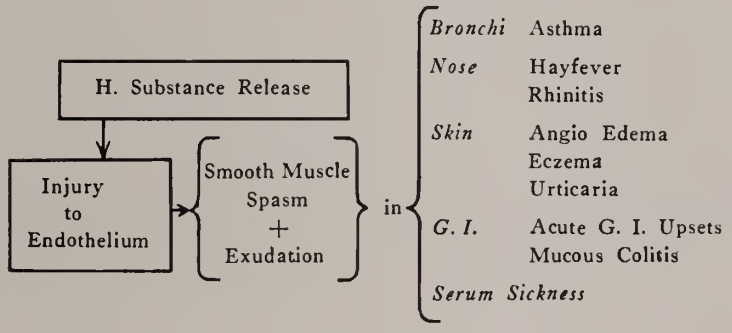
The Blocking (Thermostable, Protecting, Neutralizing) Antibody has little in common with reagin. The best known features of it are summarized in Table VI. It is called the blocking antibody because it seems to combine with the antigen in some way which prevents the antigen from performing its normal role in the allergic triad. The small diagram in Table VI illustrates this point. Nothing is known about the mechanism by which the blocking antibody competes with reagin successfully for the antigen.

The blocking antibody, produced in response to injections of antigen, confers some active protection or immunity against that antigen. This is why injections of allergen extracts are given. This antibody has been used to confer passive immunity or protection in a few clinical experiments. This aspect of treatment of reaginic asthma deserves much more study.

The blocking antibody titer subsides several weeks after antigen injections are stopped. However, the titer returns promptly, anamnestically, when antigen injections are resumed. Booster injections of allergen extracts have been used effectively in the treatment of pollen asthma. In this respect there is a close analogy to the booster injections of tetanus toxoid, typhoid vaccine and diphtheria toxoid.

Tissue Reactions. The roles of antigen and antibody in the allergic reaction have been discussed briefly. Table VII summarizes the clinical role of the tissues in this reaction. The local tissue response is basically the same. The clinical manifestation of the allergic reaction is determined by the disturbed function of the reacting tissue. Different species of animals react differently. A major shock tissue in the guinea pig is the bronchus, the pulmonary artery in the rabbit, and the hepatic vein in the dog. Man may become sensitized in most of his body systems. For example, it would not be unusual for one patient to have urticaria from aspirin, hay fever from ragweed pollen, asthma from barn dust, and nausea, vomiting, and abdominal pain from shrimp. Regardless of the site of the reaction, the basic changes in the clinical atopic-type of allergy and in anaphylaxis are thought to be initiated by injury to the endothelium. The grosser changes of exudation plus smooth muscle spasm are thought to be secondary to the endothelial injury. This is the currently accepted mechanism by which the ingestion of egg, or the inhalation of ragweed pollen causes asthma.

TABLE VII
CLINICAL MANIFESTATIONS
OF
ALLERGIC TISSUE REACTIONS



Desensitization in its true sense is seldom accomplished clinically, although the word is seen commonly in the allergy literature. Perhaps a brief review of desensitization in the experimental animal followed by some clinical comments will clarify this point. Table VIII lists the four specific ways by which an allergic animal can be made to tolerate doses of an antigen which would otherwise cause severe reactions or death:

1. The repeated small subreacting doses of antigen are thought to saturate the sensitizing antibody so that it can no longer play its role in the allergic triad of antigen-antibody-tissue reaction. This can

be accomplished in hours in the guinea pig, without the production of circulating antibody.

Table VIII
Experimental Desensitization

Hypersensitive animals made refractory by
(1) Gradual saturation of fixed antibody by small dose of antigen
(2) Active production of excess circulating antibody by repeated doses of antigen
(3) Injecting excess of circulating antibody to neutralize antigen before it reacts with fixed antibody
(4) Exhaustion of fixed antibody by sublethal reactions

2. When increments of antigen, starting with small subreacting doses, are injected over a period of three or four weeks, the animal forms antibody. This antibody may be sufficient to combine with and neutralize several multiples of the dose of antigen which would have been fatal prior to the desensitizing injections. This protection is comparable to the production of the blocking antibody already discussed.

3. An allergic guinea pig can be protected from an injection of several multiples of a normally fatal dose of antigen by prior injection with an excess of antibody. This neutralizes the antigen in the same way that autogenous antibody, just discussed, will neutralize it.

4. Finally, a guinea pig which has recovered from a violent anaphylactic reaction will, for a while, tolerate many multiples of the antigen which almost killed him. Just why this should be true is not understood. The antibody is said to be "exhausted" by this reaction.

Desensitization of the tuberculin type of allergy seems to follow the first and fourth of the principles just described. *Arthus desensitization*, so far, seems to be accomplished only by injecting enough antigen to neutralize or markedly reduce the precipitin titer against that antigen.

The biggest problem in desensitization, from the standpoint of clinical application, is that resensitization recurs promptly in a few days to a few weeks after the so-called desensitizing antigen injections are discontinued. Our allergy research laboratory is attempting to find out whether desensitization with haptens (which will neutralize antibodies but will not elicit them initially nor anamnestically) will be more lasting, and therefore more desirable than desensitization with whole antigens.

An important aspect of desensitization which has been insufficiently explored is whether the increased tolerance for antigen is ever absolute. Experimental evidence to date shows only that the increase in tolerance is for a limited number of multiples of previously shocking doses of antigen.

Clinically, there are rough counterparts of each of these methods of desensitization in man. For example, one method of co-seasonal treatment of pollen hay fever is to give one to three subreacting doses of pollen extract daily. This provides marked relief in about 75% of uncomplicated pollen cases in a few days. The immunological changes which this form of treatment causes have not been studied adequately. It has been shown, in this clinic, that the titer of circulating reagin is entirely unaffected by these small subreacting doses. Tissue concentrations of reagin should be suspectible to study, but this has not been done.

The apparent capacity of the blocking antibody to prevent asthma from atmospheric pollens and dusts has been discussed already.

A temporary increase in tolerance for ragweed pollen has been observed occasionally following violent systemic reactions from unintentional overdoses of ragweed extract. Perhaps this same principle is behind the good co-seasonal results which follow the administration of doses of ragweed extract which produce moderate to severe local reactions. It has been the policy in this clinic to employ small subreacting doses of pollen extract on the assumption that this carries a greater margin of safety than does the planned production of significant local reactions.

So far the discussion has been concerned chiefly with a comparison of the mechanism of anaphylaxis with the conventional wheal and flare, food and inhalant type of allergy. Certainly, this is the most commonly recognized cause of asthma.

Bacterial Allergy. Bacterial antigens produce at least four different types of allergic reactions: the anaphylactic, Arthus, tuberculin, and "id". Id reactions are the concern of the dermatologists. The Arthus phenomenon is a local reaction which requires strong antigens and precipitin titers in animals. This combination is found so seldom in man that little is known about it clinically.

The anaphylactic type of allergy to bacterial antigens, has been studied extensively in guinea pigs. The atopic, the ordinary type of allergy to bacteria in man, has received scant attention, although it does occur. A few examples are: The typical wheal and flare and passive transfer reactions to bacterial polysaccharides and nucleoproteins. The pale boggy nasal membranes and uvulae typical of the atopic-type of allergy is seen occasionally in association with infected sinuses especially in children. Non-

fatal anaphylactic reactions which have followed skin tests with type-specific proteins of streptococci in rheumatic fever victims. In spite of these and quite an array of other evidence that bacteria can cause the ordinary type of allergic reaction in man and in animals, it is debatable whether infectious asthma is mediated by this mechanism. No reasonable proof that it does has been offered to date.

Tuberculin Type of Allergy. There are some striking differences between the tuberculin and the anaphylactic types of allergy. These differences, and some of the similarities are summarized in Table IX. The more relevant points need a little elaboration.

Tuberculin-type of allergy is produced, typically, by infection. It is well known that the nucleo-proteins of bacteria *elicit* the tuberculin-type of reaction in animals sensitized by infection. In sharp contrast, the components of bacteria which are responsible for the *development* of the tuberculin-type of allergy (to pneumococci, for example) are not known.

Very little is known about the antibody which mediates the tuberculin type of allergy. *In vivo,* it seems to be able to sensitize a wide variety of cells in such a fashion that they will be destroyed when brought in contact with the specific bacterial antigen. This is not true of the anaphylactic nor of the atopic types of allergy.

The familiar tuberculin skin test illustrates several characteristic features, namely: there is a delay of a day or two after the antigen is injected before the reaction becomes apparent. But once initiated, it tends to last for days. And if the antigen is too strong the patient is apt to develop a fever, an ex-

TABLE IX
COMPARISON OF ATOPIC AND TUBERCULIN REACTIONS

ATOPIC	CRITERIA	TUBERCULIN
Proteins	Sensitizing Antigens	Unknown Develops in Infection (Purified Wax)
Proteins Haptens Polysaccharides	Precipitating Antigens	Nucleoproteins (Whole bacteria)
Prominent	Antibodies	Not well studied
Prompt (Min.)	Reaction time	24-48 Hours
Wheal = Transient Soft	Typical Skin Response	Tuberculin = Prolonged Nodular
High	Specificity	High
Asthma Hay Fever Urticaria, etc.	Clinical Manifestations	Local Inflamation Fever Focal Exacerbation
Eosinophiles	Cells of Exudate	Mononuclears
Possible Readily	Desensitization	Possible Readily
By Reagins	Passive Transfer	By Cells From Infected Animals
Blood Vessels Smooth Muscle	Reacting Tissue	Any. Skin ± Typical
Reversible = Wheal Irreversible = Thrombosis = Arthus	Local Injury	Reversible if Mild Irreversible = Necrotic = Thrombosis
Tissue cells + Reagin ⟹ H-Subst. + Antigen	Mechanism	(a) Infection ⟹ Allergic cells (b) Allergen + Cells ⟹ Injury of cells

The more relevant points need a little elaboration.

acerbation of the infection, and necrosis of the skin at the test site. The necrotic site may leave a scar when it heals. Mild reactions seem, grossly, to be reversible.

Passive transfer and desensitization of tuberculin allergy are, so far, of more experimental than clinical interest.

The tuberculin type of allergy *could* explain much that goes on in asthma due to infection. There is no direct experimental support of this statement. Lack of such evidence is an important gap in our knowledge of the immunology of asthma. The supposed role of tuberculin allergy in asthma is inferred from such evidence as the following: The tuberculin type of allergy is not limited to infection with the tubercle bacillus. Its occurence in pneumococcal and brucella infections is well known. It has been studied less extensively in staphylococcal, streptococcal, and other pyogenic infections. Attacks of infectious asthma follow exacerbations of sinusitis, bronchiectasis, pneumonia, or acute rhinitis or bronchitis. Asthma, as a rule, does not develop until 12-48 hours after the beginning of the infection. Infectious asthma is rarely transient. Once started, it is apt to last a little longer than the infection which precipitated it. Fever and other evidences of infection are typical. Chronic infectious asthma seems to lead to chronic lung disease much more quickly and severely than does ordinary allergic asthma. It is possible, even likely, that the chronic tuberculin type of reaction is responsible for this devastating complication of infectious asthma.

Summary

The immunology of asthma is complex. The mechanism of allergic asthma, the commonest form, is much better understood than is the pathogenesis of infectious and other forms of asthma.

Allergic asthma is, in many ways, analogous to the anaphylatic reaction in the guinea pig. There are important differences however.

The subject is discussed under the following headings: Different types of allergic reactions; anaphylaxis; active and passive sensitization; antigens, antibodies, and tissue reactions; passive transfer; desensitization; bacterial allergy in asthma. The tuberculin type is compared with the anaphylactic type of allergic reaction.

The subject matter has been presented in summarizing tables and, in the text, in the form of a critical review.

Fainting Is Its Own Cure.

The best way to "cure" a faint is simply to leave the victim lying flat. This is because a faint actually is a cure in itself, Dr. Alfred Soffer said. It's nature's way of giving the body a short adjustment interval to recover from sudden changes in blood movement.

"Fainting occurs when deep-lying blood vessels throughout the body, but particularly in the leg muscles and abdominal organs, are temporarily widened by paralysis or active dilation. This dilation—the result of complex nerve impulses—may be brought on by fright, shame, drug reactions, temperature sensitivity, pain and sudden blood loss.

"Contrary to popular belief, heart disease is rarely responsible for fainting," Dr. Soffer said in the November Today's Health magazine, published by the American Medical Association.

Changes in circulation may cause oxygen shortages in blood moving through the heart and brain. These make the body's protective mechanism work overtime. The body can meet this "challenge," but an adjustment period is needed. A faint and a fall to the ground is nature's way of getting stagnant blood moving back to the heart and brain. "Forcing a fainting person to sit up will only prolong the unconscious state, and may initiate irreversible damage."

He also advised loosening a victim's collar to take pressure off sensitive neck blood vessels. Giving him a drink of sweetened fluid after he recovers may help, particularly if he is sensitive to hunger faintness. But aromatic stimulants are of slight importance compared to the value of having the patient lie flat. This is nature's own wise remedy.

The Mechanisms of Psychogenic Asthma

RICHARD W. GARNETT, JR., M.D.
Charlottesville, Virginia

THE influence of emotion upon the function of respiration is well-known from everyday experience, referred to in such expressions as, "it took my breath away" and, getting something "off one's chest": implying, to unburden oneself. The phenomena of sighing, crying, laughing and speaking are all more or less complicated expressions of feeling, involving especially the expiratory phase of respiration. In asthma, as in other vegetative disturbances which we have come to speak of as psychosomatic disorders, the pathological reaction is simply an exaggeration of the normal physiological response to a stimulus. In the case of so-called psychogenic asthma, the stimulus is a strong, and usually partly unconscious emotion which is chronic or persistent because it is not discharged or permitted a normal outlet. It is blocked or repressed because it is unacceptable or forbidden to the conscious mind.

Prior to the discovery of the allergic process, asthma was considered primarily a nervous disease and was customarily referred to as "asthma nervosa". Thomas Willis described it in detail in 1679, and stated, "the ancients allowed the cause to be only obstruction of the bronchi, but the default is partly of lungs and partly of the nerves appertaining to the breathing parts". In 1839, Allen stated "paroxysms of asthma from mental causes happen perhaps more often in physicians than in any other class of people." In 1858, Trousseau, the great French medical teacher, who himself suffered from asthma, recited in a lecture the circumstances of one of his own attacks. While in his coach barn, he detected his coachman in an act of thievery and, "under the influence of the moral emotion, my nervous system was excited and under these conditions a cause (barn dust) which under ordinary circumstances would not have caused any such effect, acted in this particular case." Fred Knight, in Boston, about 1900, summed up the three factors necessary to asthma as, (1) the neurotic habit, (2) a morbid condition somewhere in the respiratory tract whose irritation shows itself by reflex exhibition in the bronchial tubes, and, (3) the exciting factor which may be atmospheric, digestive, mental or other remote irritatives which act reflectively on the bronchial tubes.

Following the demonstration of the anaphylactic phenomenon, attention became focused on the allergic component of asthma and the older view was considered obsolete. However, as accumulated experience proved that the immunologic response did not explain all the clinical observations in asthma and as the psychosomatic viewpoint was developed, it became clear and generally accepted that it was not a question of one or the other, but both. The recognition of emotional factors in the etiology of asthma does not negate the equally well established allergic factor. Asthma is a symptom, the immediate cause of which is a spasm of the bronchioles, usually associated with edema and secretion. In the light of clinical and experimental evidence, there is no doubt that this spasm can be precipitated by exposure to a specific allergen or by more or less specific emotional situations. Either alone can produce an attack, but in most cases, both factors operate to a greater or lesser extent, varying between individuals and in the same individual at different times. Many people, with definite evidence of allergic sensitivity, do not develop clinical symptoms until the emotional factor is added to it. Some patients with asthma lose the clinical symptoms following psychotherapy or resolution of the emotional conflict while retaining the same degree of allergic sensitivity. By the same token, the clinical symptom may be controlled by treating the allergy and leaving the emotional element untouched. This is probably explained physiologically by the theory of summation of stimuli and also accounts for the therapeutic claims of both psychiatrists and allergists for their respective techniques. Going one step further, there is some evidence that the predisposition to allergic reactions in general are in some way related to personality conflict. In other words, it is possible, that sensitivity to allergens and to certain emotional trauma frequently occurs in the same person and both may be manifestations of the same constitutional factor. What, then, is the nature of these emotional stimuli, conflict situations, personality difficulties, etc., which are claimed to be of such importance in the causa-

RICHARD W. GARNETT, JR., M.D., *Associate Professor of Neurology and Psychiatry, University of Virginia.*

tion of asthma? Many clinical observers have pointed out a great variety of emotions such as sexual excitation, anxiety, jealousy and rage—in fact, almost any intense emotion has been observed to precipitate asthmatic attacks, including joy. But behind this confusing array of emotions, a central physiological constellation can be discovered. The nuclear psychodynamic factor is a conflict centering in an excessive, unresolved dependence upon the mother, or mother substitute. In attempting to deal with, or defend itself against the anxiety arising from this conflict, the personality may erect many different character traits. We may, therefore, find asthmatics who are aggressive, ambitious, hostile, hypersensitive, aesthetic, timid, etc. Some are the compulsive, rigid personality organization; others are impulsive, flighty and hysterical. There is probably no very typical profile, but the repressed dependency upon the mother is a constant feature around which various character defenses may develop. This maternal dependence is different from that of the peptic ulcer cases and gastric neuroses. In the asthmatics, it is not so much the wish to be fed or provided for, but to be protected, and possessed that the person both wants and rejects and tries to repress. Every situation which threatens to separate the patient from the protective mother, or her substitute, may precipitate an attack. In children, the birth of a sibling is a conspicuous factor associated with the onset of asthma. The mothers of asthmatic children frequently are either overtly or subtly rejecting, perhaps manifested by over-protective attitudes or excessive concern for, or ambition for, their children. The child senses a lack of genuine love and security, wants it, but suppresses the wish, and experiences anxiety. He wants to cry out for his mother but he is ashamed to or afraid to, and the asthmatic attack is the somatic manifestation of the repressed impulse. In the adolescent or young adult, other factors may serve to activate the fear of loss of the mother, such as the onset of sexual activity or temptation, impending marriage, leaving home to work, etc. At any age, but especially in adults, the development of forbidden hostile or aggressive attitudes toward the mother figure may threaten the dependent relationship and be the main source of difficulty. Any situation that requires the patient to manifest independent and mature behavior may revive the conflicts with his dependent tendencies and precipitate an attack.

To illustrate some of these reactions in several cases that come to mind: A young woman who now has severe asthma with recurrent periods of status asthmaticus is an only child and had her first attack shortly after graduating from high school and beginning her first job. She promptly quit her job and has lived at home with her parents since. She uses her asthma as an excuse to avoid employment or marriage.

A middle-aged asthmatic man is married but continues to live in his mother's house. The wife and mother are openly hostile and jealous toward each other and the wife puts the patient under pressure to move away but he had been unable to make the break. Attacks were frequently precipitated by emotional scenes growing out of this situation.

A middle-aged married woman had her widowed mother living with her. She resented this situation but felt obligated. Whenever she gave any evidence of irritation or resentment at the mother being in the home, the mother would assume an injured, martyred attitude which would make the patient furious but as the same time arouse feelings of guilt and frustration. Asthmatic attacks frequently occurred at such times.

A student, who had asthma from the age of 6 to 16, stated that he was quite conscious of having attacks when he felt sorry for himself and wanted some show of concern from his mother. He literally outgrew his asthma when he developed more mature reactions and discarded his childish pattern.

A 40-year old house wife was not so fortunate. She had felt rejected by her own mother in favor of a younger sister and she had reacted to this with more or less open hostility and rebellion. However, after her mother's death, she married her boss, a much older man with whom she had a very dependent relationship but towards whom she also has considerable unconscious hostility. He is a good, kind and long-suffering man, so she could not express her feelings openly but had to repress them. She routinely developed wheezing respiration at about the time he was expected to return from work in the evenings, and, whenever he went out at night to a meeting without her, she would have a severe attack and call him home to give her an injection. Thus she expressed her hostility, by her asthma, and yet avoided admitting it to her conscious awareness which would have endangered her dependent relationship. She constantly professed fear of his dying with a heart attack and yet seemed to be hastening this eventuality by subjecting him to the harrassment of her symptoms. This is a clear-cut example of unacceptable emotions (hostility) and unacceptable wishes (that her husband would die) that were

repressed but found expression through a somatic symptom.

In summarizing his material on the emotional background of asthma, French concluded that asthmatic attacks tend to be precipitated by situations that threaten to separate or estrange the patient from a mother figure. In such a situation, the asthma attacks seem to have the significance of a suppressed cry. The patient suppresses an expiratory function, such as crying, by which he would express his protection-seeking attitude towards the mother. This suppression of crying represents the wish not to give in to the dependent attachment to the mother. For some reasons, in the situations which provoked asthma attacks, the patient was unable to cry. Some of the patients stated that they had not been able to cry in years, and in some of the treated cases as the asthma attacks ceased, attacks of crying occurred instead. This was particularly apt to occur as insight into the causes was gained. The threat of loss of mother love through yielding to temptation was a very frequent factor. Many histories reveal that the mother had bound the child in a dependent relationship and at the same time rejected them at the first sign of any sexual activity or interest. Sexuality, then, became a temptation that threatened loss of the mother's love on which it was so dependent. It has been frequently observed in this connection that male asthmatic patients had continued to sleep with their mothers until the age of puberty or later. Many asthmatic patients, as children, were inclined to be overly obedient and submissive, thereby seeking to avoid rejection. Others used sickness or pain as a method for gaining and holding the sympathy and affection of the mother. Regarding the psychosomatic aspects of allergy, Karnosh rightly stated that, "no one can ignore the multifarious emotional, mental and neural phenomena which are interlocked with the allergic reaction in human tissue. Even though one cannot establish a causative relationship between allergy and nervous or mental disease, it can be said that the two afflictions are often concomitant in the same person. No allergic patient can be adequately evaluated without considering the personality structure in which the disease is implanted."

As to the physiological mechanisms involved in the actual causation of bronchial spasm from emotional stimuli, there is still much to be learned. We know that perception from both conscious and unconscious sources arising in the cortical and subcortical areas are transmitted to the hypothalamus where they apparently take on emotional significance. Thence into the autonomic pathways, the sympathetic and parasympathetic, which have some selective function. In general, asthma falls in the group of conditions associated with parasympathetic dominance. It is also spoken of as one of the conditions representing a so-called "vegetative retreat", associated with the type of personality that meets life in a passive dependent fashion with repression of aggression.

In addition to the neural, there are undoubtedly hormonal factors operating. The demonstrated symptomatic efficacy of cortisone and ACTH in asthma would indicate that the mechanisms of the endocrine system for adaptation to stress are also involved in the etiology.

TV Aids Available

A lending library of TV-tested visual aids is now available from the A.M.A. Bureau of Health Education for demonstration purposes. A booklet, "A.M.A. Televisuals," describing the anatomical charts, three-dimensional relief models and films available to medical societies without charge, may be secured from the Bureau of Health Education, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois. Put your name on the list for supplementary literature which will be issued as these "lending library" facilities expand.

Classification and Etiologic Diagnosis of Asthma

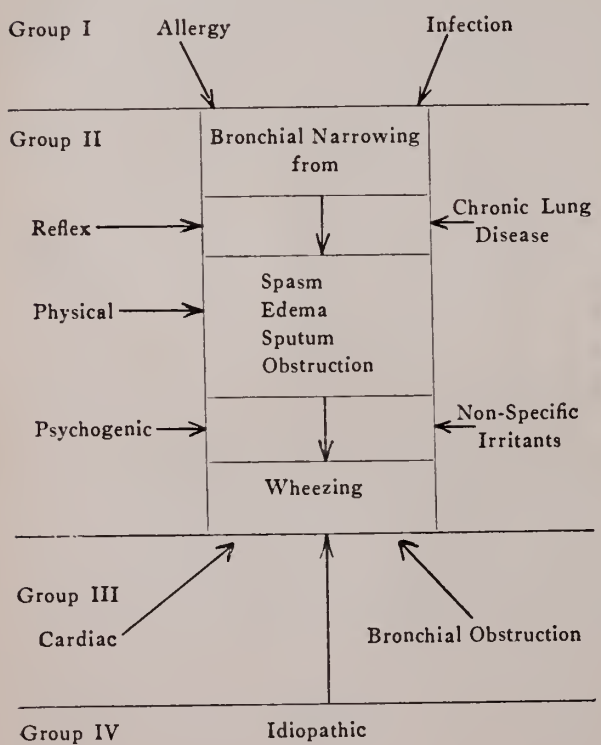
OSCAR SWINEFORD, JR., M.D.
Charlottesville, Virginia

The first thing to do when a patient comes for relief of asthma is to make him comfortable. *Symptomatic treatment* will be discussed later by Dr. Blanton. The next step is to *classify the causes of* his *wheezing*. The information needed for this can be obtained, usually, by the history and physical examination. The third step is to attempt to *identify the individual causes of wheezing*. To do this: X-ray, cardiac, pulmonary, psychiatric, clinical laboratory examinations, and skin tests may be necessary. These second and third steps will be discussed in this section. The final step is *specific treatment*, which will be discussed later.

Classification of the Causes of Wheezing: Figure 1 summarizes our ideas about the causes of wheezing. Notice that they are in four groups.

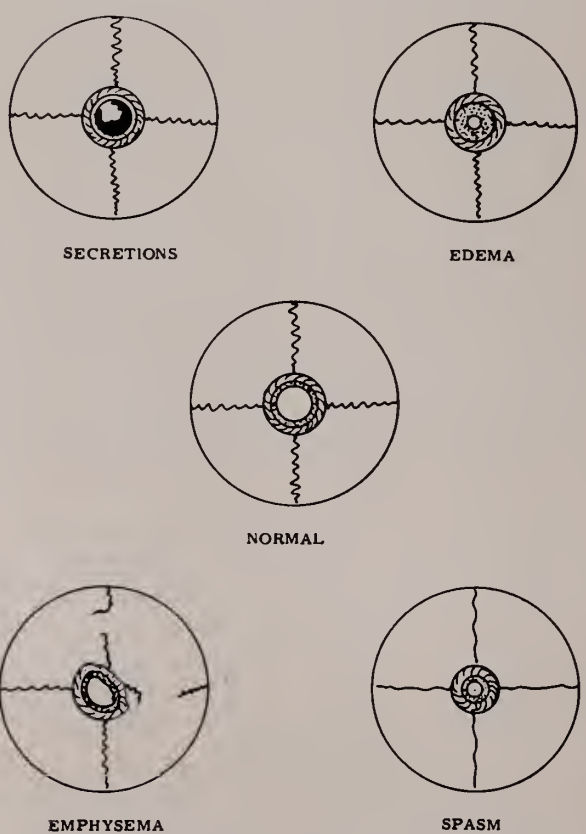
Allergy (atopy) and infection are in Group 1. We think these are the two most important primary causes of wheezing. Allergy (atopy) alone caused nearly 40%, while infection alone caused about 10% of a large series of asthma cases. In more than half of this series, asthma was due to allergy plus infection plus one or more of the other causes listed in Figure 1.

FIGURE I
CAUSES OF WHEEZING



Group II: Reflex, physical, psychogenic, nonspecific irritants, and chronic lung disease may serve as primary causes, but their usual role is to intensify asthma from other causes. They increase the morbidity of asthma so often that they deserve careful attention in order to provide maximum relief for the average patient.

FIGURE II
WHEEZING MECHANISMS
(Morgan E. H. - Mason Clinic Bull.)



Group III: Cardiac asthma and bronchial obstruction are usually more important in their own right than as causes of wheezing. Don't forget, however, that they may cause attacks of asthma which are hard to distinguish from those due to infection or allergy.

Idiopathic causes are in Group IV. The percent-

age in this group is small when the criteria to be discussed are thoughtfully applied.

Figure 2 simply supplements Figure 1. The normal bronchus is in the center. The lumen is narrowed by secretions (upper left), by swelling of the mucosa (upper right), by muscle spasm (lower right), and by loss of the external supporting structures of the bronchial wall (lower left).

The most common single cause of asthma is the allergic reaction, elicited by the ingestion or inhalation of things to which the patient is sensitive. We think the clinical picture of ordinary allergic asthma is so characteristic as to be easily recognized in the majority of instances. There are exceptions, of course.

What do we look for which will allow us to classify an asthmatic as allergic? Table I contrasts the clinical features of allergic with those of infectious asthma.

Allergic Asthma

The History: A family history of allergy merely suggests that the patient's asthma may be allergic. *Other manifestations of allergy* are the rule in allergic asthmatics. They are apt to have hives, atopic eczema, food idiosyncracies, or particularly, hay fever. The average allergic asthmatic knows that *inhaling certain things* will make him sneeze or wheeze. Everyday examples are: Pollens, dust from books, beds, rugs, basements, hay, feeds, pillows, bath powders; emanations from cats, dogs and horses. By the same token he usually recognizes one or more *foods* which will give him asthma. *Seasonal asthma* is usually caused by pollens in the spring, summer, or early fall, or, less typically, by house dusts in the late fall or winter.

The allergic asthmatic usually learns that he has less trouble if he avoids certain food, inhalant, and environmental exposures. But, unfortunately, he is

Table I

Clinical Comparison of Allergic (Atopic) and Infectious Asthma

Allergic (Atopic)	Differential Criteria	Infectious
	History	
Predictable often	Season	Cold and changeable
Late in attack	Cough	Prominent, early
No residual	Cough	Residual
Mucoid, early or late	Sputum	Purulent
Mucoid, early or late	Nasal discharge	Purulent
Foods and inhalants	Precipitating factors	Respiratory infection
Frequent	Other allergy	Infrequent
Frequent	Sneezing	Infrequent
Frequent	Itching eyes	Infrequent
Frequent	Lacrimation	Infrequent
Absent	Fever	Common
No effect	Antibacterial therapy	Shortens or aborts
Good	Response to adrenalin and aminophylline	Fair or poor
	Physical Examination	
Pale swelling	Nasal Mucosa	Red, swollen
Mucoid	Nasal secretions	Purulent
Pale translucent	Uvula	Red, wrinkled
Pale	Tonsils	Red or normal
Pale	Lateral pharynx	Red streaks
Asthma	Chest	Asthma
Transilluminate	Sinuses	Often opaque
	Laboratory Data	
Clear or thick mm. symmetrical	Sinus X-rays	Opaque—hazy, often unilateral
Normal	Leukocytes	Elevated or normal
Infrequent	Eosinophilia	Common
Foods and inhalants prominent	Skin tests	Foods and inhalants not prominent.

apt to have trouble from other foods and inhalants which he does not recognize. It is the job of the physician to identify these. It is not necessary to identify all of the causative allergens in order to classify the asthma as allergic.

Cough has great significance in the classification of asthma. *The allergic asthmatic coughs himself* OUT OF *an attack* typically. He may cough a little during, but seldom before an attack. If he does, it isn't prominent. The end of the allergic attack is heralded by an exacerbation of the cough, which finally becomes productive of glairy, mucoid sputum.

Physical examination usually indicates that the asthma is allergic. Although we are talking about asthma, the examination of the nose and throat is often diagnostic. For example, the allergic nasal mucosa is usually pale, swollen, and perhaps boggy. Pale, grape-pulp-like polyps may be present. The throat is usually pale. Particular attention should be paid to the uvula, a greatly neglected diagnostic structure. In allergic asthma it is usually pale, swollen, and translucent at its tip. The sinuses transilluminate normally and do not discharge pus in uncomplicated allergic reactions.

Strangely enough, examination of the chest, the site of the asthma, is seldom helpful in classifying the asthma except when complications of allergic or of infectious asthma are found.

Other features which suggest allergic asthma are: The temperature is usually normal. Adrenalin and related drugs are usually quite effective. The allergic asthmatic usually feels well, for many years, when he is not wheezing. Allergic asthma is the only kind in which skin tests may be helpful.

Infectious Asthma

The clinical picture of *infectious asthma* is different. It is just as characteristic and just as easily recognized as allergic asthma. We think this concept is important. The clinical features of infectious asthma are contrasted with those of allergic asthma in Table I. Some of these differences were described in the 1920's. Others were added later. It is hard to understand why these simple but striking differences have been so little emphasized in the asthma literature.

The genesis of infectious asthma can usually be traced to an acute infection in the upper or the lower respiratory tract, from which the patient did not recover completely. The usual sequence is a post-nasal discharge, a little cough, mild stuffiness of the nose, which tend to flare-up from weather changes, fatigue, drafts, or chilling. Sooner or later, (a week, a month, a year) the cough will become troublesome and eventually wheezing will begin. Thereafter each exacerbation of the chronic respiratory infection brings on asthma. There are many variants of this typical sequence.

What do we look for which will allow us to confirm the suspicion of infectious asthma, which should be strong at this point? *Cough* is most significant. The *infectious asthmatic coughs himself* INTO *an attack*. Cough *precedes* the wheezing by minutes, hours, or days. It is *troublesome* before, during, and after the attack. The infectious asthmatic may be undecided whether the cough or the wheezy dyspnea is worse. *Sputum* may be mucoid early, but it is purulent towards the end and for some time after the attack.

Other evidences of infection, such as fever, aches, easy fatigue and the history of pus in the anterior or post-nasal discharges, may be present.

Physical Examination: Again, the nose and throat provide major leads. The nasal mucosa is not pale; it is red and swollen. The nasal space is usually bridged by mucopurulent strands, or the pus may be in the attic, floor, middle meatus, pharynx or nasopharynx. The *uvula* may be diagnostic. It is apt to be red and swollen and tends to wrinkle when the patient gags. The throat provides other clues often. For example, a velvety red swelling of the mucosa behind a posterior pillar usually means infection in the ethmoid on that side.

Transillumination may give useful information about the anterior sinuses. *This should never be omitted* from the routine examination of the asthmatic.

Examination of the chest seldom helps to differentiate allergic from infectious asthma. But a persistent patch of crepitant or moist rales on several examinations is more consistent with infectious asthma, particularly if heard between attacks.

Laboratory Examinations: Skin tests are not helpful in this type of asthma, even with vaccines, chemical fractions, or growth products of bacteria. We think *eosinophilia* is *typical of infectious and not of allergic* asthma. This is the exact opposite of the usual teaching. The sedimentation rate and leucocytes may be increased, but normal values do not rule out infectious asthma.

Infectious asthma responds to simple symptomatic therapy much less readily than does the allergic type. An attack of asthma which does not respond to adrenalin or intravenous aminophyllin, that fact alone, strongly suggests infection as the

cause. Infectious asthma is, with few exceptions, improved by antibacterial drugs, appropriately chosen and administered. This will be discussed later.

Non-Allergic, Non-Infectious Causes of Asthma

The criteria by which we recognize chronic lung disease, cardiac asthma, bronchial obstruction, and the reflex, physical, and psychogenic causes of wheezing have been discussed in detail elsewhere. Instead of repeating that discussion, it seems more appropriate to summarize in Table II those symptoms

Table II

Symptoms and Signs Suggesting Presence of Groups II & III Non-Allergic, Non-Infectious Causes of Wheezing

History	
Dyspnea without wheezing	Aspiration
Exhausting cough	Attacks due to
Fear of death	Heat
Interval air hunger	Cold
Known heart disease	Weather
Rapidly developing	Chest pain
Debility	Hemoptysis
Emphysema	Relief by
Seeking air for relief	Rest
Unilateral emphasis	Supine

Physical Examination	
+ A-P. diameter	Asymmetrical ventilation
Interim cyanosis	Faint heart sounds
Interim orthopnea	Inspiratory stridor
Nasal polyps	Interim reduced exercise tolerance
Sighing respiration	L. ventricle loads
Thyroid nodules	No wheezing in attacks
Venous Collaterals	

and signs which should make the physician look for other causes of asthma than allergy or infection.

A brief elaboration of the data in the tables follows:

The History. Uncomplicated allergic or infectious asthmatics are short of breath only when they wheeze. They do not sigh. They do not hyperventilate nor complain of air hunger when they are not wheezing. Nervous people do. The asthmatic who recognizes distinctly more discomfort in one lung than in the other usually wheezes from other causes than simple allergy or infection. The uncomplicated allergic or infectious asthmatic is rarely afraid he is going to die in an attack. The cardiac asthmatic is. Simple allergic or infectious asthma is not relieved by sitting or lying down. Hemoptysis is never seen in simple allergic asthma. It may occur transiently during an exacerbation of infectious asthma. It is scant then. Significant hemoptysis requires some other explanation. Rapidly developing debility or emphysema or exhausting cough are rare in allergic asthma. They may complicate infection, but when they do the infection is usually quite obvious. The cardiac asthmatic seeks air at the window or outdoors more commonly than the allergic or the infected case. Pain in the intercostal muscles after a severe attack is over is common. Chest pain during an attack is unusual in uncomplicated allergic or infectious asthma. Difficulty in swallowing as a prodrome or during an attack suggests psychogenic asthma. Subclinical allergic or infectious asthma is commonly increased to clinical severity by temperature and weather changes, drafts, etc. These are manifestations of so-called physical allergy.

Physical Examination. The physical signs of allergic and infectious asthma have been reviewed. In addition to those, the following signs should be looked for specifically in the examination of every patient who wheezes, since one or more of them are apt to be present in chronic asthma and since they imply other causes of wheezing than allergy and infection. They are: Nasal polyps, thyroid nodules, increased anterior-posterior diameter of the chest, fixation of the chest in the inspiratory position, sighing, hyper-ventilation in the absence of wheezing, cyanosis between attacks, orthopnea in the absence of wheezing, localized inspiratory stridor, dyspnea without wheezing, localized suppression or accentuation of breath sounds, asymmetrical ventilation by inspection or palpatation, faint heart sounds, the various evidences of left ventricular loads, significant reduction of exercise tolerance between attacks, signs of hyperthyroidism, cold clammy hands and feet.

There is nothing mysterious about any of this. The ability to recognize these symptoms and signs is a part of the basic equipment of every medical school graduate. If these symptoms and signs are looked for, they can be found easily. When found, they mean that wheezing is due to a complication of allergy of infection or to one of the other causes.

Asthma is not a complete diagnosis. So far, attention has been focused on the clinical classification of the causes of wheezing into groups. The next step is the identification of the individual causes within the groups. This is not an unusual approach. For example, the cardiac is diagnosed, first, as having heart disease. Next, is it hypertensive, thyroid, luetic, arteriosclerotic, rheumatic, coronary or con-

genital? Further, are there arrythmias, valvular disease, enlargement, angina, infarction, or congestive failure? Similarly, meningitis is an incomplete diagnosis. Proper management requires further classification into acute and chronic, tuberculous, meningococcic, influenzal, pneumococcic, cryptococcic, viral, etc.

The diagnosis of asthma, to be complete, requires the recognition of the *types of causes* AND the *individual causes* of wheezing in each case. For example, the simplest case would be diagnosed: asthma, (type of cause) allergic, (individual cause) ragweed. The diagnosis of an average chronic case would be: asthma; (types of causes) allergic, infectious, reflex, physical; (individual causes) wheat, feathers, house dust, left antrum and ethmoid infection, nasal polyps, drafts, temperature changes from hot to cold. Another chronic case might be diagnosed as: asthma; (types of causes) allergic, chronic lung disease, cardiac; (individual causes) milk, oak and grass pollen; bronchiectasis and emphysema; post-myocardial infarction with paroxysmal left ventricular failure.

Identification of Individual Causes of Wheezing

Recognition of the individual *non-allergic* causes of wheezing is arrived at by the use of the disciplines of internal medicine. The internist or the general practitioner should be fully as alert as the allergist to the recognition of sinusitis; psychogenic influences; nasal polyps or thyroid nodules; bronchial obstruction from carcinoma, mediastinal tumors, contracting tuberculous scars, or foreign bodies; left ventricular loads; bronchiectasis, cystic disease of the lung, silicosis, emphysema, or pulmonary fibrosis. And yet these complications have seldom been looked for in the asthmatics who come to this clinic. To explain this requires a brief digression.

Failure of the physician to recognize non-allergic causes of wheezing is due, largely, to failure of his medical school and post-graduate instructors to teach him as much about asthma as they did about heart disease, diabetes, pneumonia, peptic ulcer, anemia, etc. Allergists are partly to blame also. They have over-emphasized the role of allergy to a degree which encourages the concept that asthma is strictly an allergic disease. The tenor of instruction in asthma at the University of Virginia has been that, *while allergy is of major importance*, there are *other causes which must be looked for.* Failure to look for them has given rise to the cliché, which our students will remember, "When the patient starts wheezing, the doctor stops thinking." It will be a happy day for the asthmatic when medical educators realize, and accept, their responsibility for the aptness of that cliché.

The allergic reaction is, statistically, the most important cause of wheezing. The disciplines of the allergist are necessary to the identification of individual allergens. *The allergist uses the history and skin test to obtain* a TENTATIVE *list of offending allergens.*

The History. The *history form* which *follows* was designed to provide an orderly approach to the accumulation of diagnostic information from the patient. If it is filled out as indicated, most of the criteria for group classification and a number of individual causes of wheezing will be apparent in most cases.

University of Virginia Allergy Clinic

Complaint: Asthma

Other Allergy: Question by cardinal symptoms. If present mark * and discuss each briefly. Scratch out if not present. If P.I., mark P.I. and discuss under P.I.

Hay Fever		Angioneurotic edema
Urticaria	Eczema	Food idiosyncracies

Present Illness:

Onset of first symptoms: Year, Month, Acute or insidious?
precipitating factors:

Attacks: Note—

Frequency	Severity
Duration	Prodromes
Months they occur in	Sequellae
Time of day	Fever

Freedom between attacks, partial or complete?
Effect of change of residence, occupation, etc.
Unilateral preponderance?
Cough: Precedes? Prominent?
Character nasal and bronchial discharges

List sequence of events from onset to present trouble.

Food History: Determine if any foods are related to chief complaint or to other allergy, if there are any strong dislikes, or if any particular foods cause gas, bloating, constipation, diarrhea, pain, cankers, nausea and vomiting, or mucus. Ask about all foods. Record abnormal effects from each food, i.e., milk-asthma; eggs-migraine; ? wheat-diarrhea.

Inhalant History: Note unusual effects of exposure to: animals, fumes, pollen, smoke, insecticides, powders, feathers, wool; or to dusts from feeds, house, road, occupation. Record abnormal effects from each inhalant, i.e., dust-sneezing; feathers-wheezing; ? flour-cough.

Physical History: Determine effect of: seasonal changes, hot days, cold days, changes from cold to hot or hot to cold, exercise, fatigue, emotions, humidity, drafts, wet feet, dampness, sun, hot and cold baths. Record

abnormal effects, i.e., exercise-wheezing; drafts-fresh colds; ? dampness-aggravates asthma.

Focal History: Record: teeth, if dead, injured, cut with difficulty, or painful; fungus infections, sore throats, purulent nasal or bronchial discharge, excessively foul stools, constipation; or suspicious potential foci in appendix, gall bladder, tubes, prostate, or kidneys. Discuss if present.

Treatment History: List all tried. Note the effective ones.

Family History: Record allergic diseases in proper space.

Father _____	Mother _____	Brothers _____
Uncles _____	Uncles _____	Sisters _____
Aunts _____	Aunts _____	Children _____
Cousins _____	Cousins _____	
Grandparents __	Grandparents	

Environment:

Occupation	Rug	Soap
Pillow	Upholstery	Dentifrice
Mattress	Cosmetics	House heating
Cover	Perfume	Animals
		Silica exposure

List any unusual exposures.

Systems History.

When this form is filled out carefully by a medical student studying his first case of asthma, the approach to the solution of the problems of that patient is usually quite apparent to the instructor, before any other diagnostic procedures are done. A detailed discussion of how to take an asthma history is not appropriate here, since it is available elsewhere. The importance of much of the information asked for has been brought out already.

The following typical case should illustrate the usefulness of the history.

Complaint: Asthma. A.B. white male, age 50.

Other Allergy: Hay Fever, 20 years, May 1 to July 1 and August 20 to October 1; *Urticaria* from peaches, peanuts and shrimp.

Onset of Wheezing: 1947, October, insidious, cause not known.

Sequence of Events: First year: wheezing, mild; followed nocturnal cough. Well in mid-summer. Wheezed with hay fever after September 1. Became severe, with cough and almost continuous stuffy nose, about October 10. Seldom comfortable more than few hours since then, except in mid-summer. Dyspnea on exertion, without wheezing, past 6 months.

Frequency: Several times daily. *Duration:* 5-45 minutes.

Time of Day: Worse at night and early A.M. Mild wheezing at any time.

Months Asthma Occurs in: All now. Worse May-June, September, late fall and winter.

Brought on by: Colds. See: food, inhalant, and physical histories.

Relieved by: Pills, midsummer, penicillin "shots" in winter.

Prodromes: Hay fever in summer, cough in cold months.

Sequellae: Tired, dyspnea on exertion, interval cough, stuffy nose.

Unilateral Preponderance: Right side nose stuffier than left.

Freedom Between Attacks: Partial in winter, complete in summer.

No Change in Environment

Cough: Follows wheezing in spring and early fall. Precedes wheezing and is prominent and daily in winter.

Nasal Discharge: Watery in spring and in September, yellow with colds and in post-nasal drip every A.M.

Bronchial Discharge: Mucus in May and June and in early September, becoming yellow in October.

Food History: Peaches, peanuts, shrimp cause urticaria.

Inhalant History: Hay fever worse when he drives through country in hay fever seasons.

Wheezing from: dust, fluffing feather pillows, moth crystals and sprays, fresh paint, and first cigarette in A.M.

Physical History: Stuffy nose from drafts. More cough and wheezing in damp rainy weather. Wheezes when laughs or runs up stairs.

Family History: Mother and one brother have hay fever.

What do we learn from this history (which can be duplicated hundreds of times from the files of any allergy clinic)?

He is *allergic:* With hay fever, urticaria, seasonal asthma, and a positive family history for allergy.

He has *allergic asthma* from grass in May and June, from ragweed in late August and September, and from dust and feathers at other times. It is associated with hay fever. Cough follows wheezing during the pollen seasons. The sputum is mucoid then.

He has *infectious asthma. Cough* is *prominent* during the cold months. It *precedes* the attacks then. Asthma is precipitated by colds. The bronchial and post-nasal *discharges* are *yellow* in the cold months. The *right side* of the *nose* is stuffier than the left.

His *mixed allergic* and *infectious* asthma is aggravated by *physical* causes, such as damp rainy weather. He has wheezing from *non-specific irritants,* such as moth crystals and sprays, fresh paint, and cigarette smoke.

The role of *chronic lung disease* is strongly suggested by the morning cough, dyspnea on exertion without wheezing for six months, and wheezing from running up the stairs.

Sinus infection in the right ethmoids is suggested by the stuffy nose on the right and the purulent morning post-nasal discharge.

There is no evidence in this history of wheezing from psychogenic causes, heart failure, nor bronchial obstruction.

This case can be diagnosed, by history alone, as asthma, allergic, infectious, physical, (probably) chronic lung disease with ethmoid sinusitis. Specific

allergens are (probably) grass, ragweed, dust and feathers.

Physical examination would disclose promptly whether there were nasal polyps or evidence of sinus disease. X-ray examinations of the sinuses and chest plus simple pulmonary function studies with the vital capacity machine would verify the infectious and chronic lung disease components of his syndrome. Carefully obtained cultures of the sputum and nasal and sinus discharges would disclose the causative organisms.

The next step in the identification of individual allergens is skin testing.

Skin tests: Scratch (cutaneous) tests should always precede the intradermals (intracutaneous) because of the greater risk of anaphylaxis from intradermal testing.

Satisfactory extracts in great variety can be bought from a number of manufacturers, which Dr. Guerrant has listed.

How many and what tests should be done? This question has never been answered properly. No two allergists employ the same routines for testing. The practitioner who handles a few simple allergy problems obviously could not afford to maintain the thousand or more extracts used by the allergist. In this clinic, we test routinely with extracts of all of the ordinary foods and with about forty inhalants which are common causes of asthma. Additional tests are made when the history suggests the need for them.

A discussion of the details of skin testing is much less appropriate here than are a few pointers on the proper *interpretation* of *positive skin reactions.*

No amount of skin testing can be considered an adequate asthma investigation. *Skin tests may be of great value in providing etiologic leads* in the *allergic* patient, a large percentage of all asthmatics. On the other hand, *skin tests are of no help in the accumulation of the other data,* which are so *necessary to* the *proper management of asthma.* This should be clear, by now.

Don't assume that a reacting allergen is, necessarily, a cause of the patient's symptoms. A positive tuberculin test often does not mean *active* tuberculosis. By the same token, positive scratch or intradermal reactions to foods and inhalants do not necessarily imply, by any means, that asthma will follow exposure to them. It is probably a fair statement that our patients tolerate with complete impunity at least 80% of the foods and inhalants to which they give positive skin reactions. A food which causes a positive skin test may not cause asthma, but it may cause urticaria, indigestion, a headache, a rash, or it may cause no symptom at all. Actually, testing the skin to identify a substance which causes bronchial symptoms seems so illogical that even the limited effectiveness of skin testing is surprising.

Why go to the trouble to do skin tests when there is such a low incidence of clinical correlation between the tests and asthma? Positive *skin reactions* and the *history* provide *etiological leads.* The actual role of these individual leads has to be verified. The methods by which this is done will be discussed by Dr. Guerrant. We think the experienced allergist can help almost as many asthmatics without skin tests as with them, but it would probably take longer.

Skin reactions are frequently negative to substances (especially foods) *which can be shown, by clinical trial, to cause asthma. Conjunctival tests* with the suspected allergen are often positive, particularly in pollen asthma. More recently, the *inhalation of allergens* has attracted considerable attention as a means of identifying individual allergens. This is not recommended for general use yet, since violent attacks of asthma may be precipitated rather easily by the inhalation of allergens which are too concentrated.

The identification of foods which cause asthma but do not elicit positive skin reactions is a difficult problem. Elimination diets are an effective approach. At present we are using a "Rare Foods Diet", which consists of foods rarely eaten in Virginia. The use of elimination diets is discussed by Dr. Guerrant.

There are many "tricks of the trade" such as analyses of the enviromental dusts and fungi, short changes in residence, vacations from work and psychiatric evaluation which the allergist employs in the problem cases.

Untreated asthma tends to become chronic. Chronic syndromes require chronic treatment. Time is saved, in the long run, and results are better when the study of an asthmatic is begun with a detailed history and physical examination. This rarely takes less than an hour and a half, usually longer. Twenty-five years of intensive study of thousands of asthmatics in this clinic have failed to yield a suitable substitute for painstaking study of the problems of each cause.

Summary

The over-all problem of asthma would be simplified enormously if all cases were studied *before* their asthma became severe.

The allergic reaction to foods and inhalants is the most important single cause of wheezing. Respiratory tract infection is next. Other causes of wheezing are present in the majority of cases of chronic asthma. Examples are: Reflexes from nasal polyps; physical stimuli from heat, cold, and weather changes; chronic lung disease, such as emphysema and bronchiectasis; nonspecific irritants like smoke, paint, and moth crystals; and a variety of psychogenic influences. These tend to aggravate asthma from allergy and infection more often than to serve as primary causes.

Asthma from left ventricular failure and from bronchial obstruction may be difficult to distinguish from and may be present concurrently with asthma due to allergy or infection.

From four to six of these types of causes of wheezing can be identified in most chronic asthmatics. Criteria for recognizing these various types of causes of wheezing are outlined.

Methods are outlined by which we identify the individual foods and inhalants which cause allergic asthma in a specific case. They include the allergy history, skin and conjunctival tests, elimination diets, inhalant avoidance. These are outlined in some detail.

It is emphasized that skin tests have definite diagnostic limitations and that they are of no value in the recognition of any cause of wheezing except allergy.

Diet, Not Society.

The lower incidence of high blood pressure in certain native tribes is not necessarily due to the primitive life being simpler than ours. It might partly be because the habit of automatically sprinkling salt on food before tasting it is common only in western societies, according to two Brookhaven National Laboratory physicians. However, they noted that high salt intake is not sufficient to cause hypertension unless certain other factors also are present.

Drs. L. K. Dahl and R. A. Love, Upton, N. Y., reported they studied 1,444 persons of whom 163 never salted food at the table, 645 salted food only if it tasted unsalty, and 636 salted everything without tasting it first. Only one in the first group was found to be hypertensive, while 47 of the average group and 64 of the high-salt-intake group had high blood pressure. The intake of the low-salt group was almost as low as that of the Greenland Eskimos, Australian aboriginals, mountainous Chinese tribes and the Cuna Indians of Panama. These peoples have been found to be virtually without any cases of hypertension. This sometimes has been attributed to their "simple" lives, but some authorities doubt that primitive life is so much simpler than ours and Drs. Love and Dahl suggested that low salt intake may have more to do with their lack of hypertension.

Their study was prompted by the discovery that among 28 consecutive hypertensive patients only one denied ever adding salt to food. With the aid of the Atomic Energy Commission, they studied every member of the laboratory staff who reported for a physical examination.

They pointed out that the study does not establish a definite cause-and-effect relationship but suggests that salt is one of several factors "necessary in appropriate combination" for the development of hypertension. More persons among the high-intake group were overweight than among the low or average salt-eaters. This could be because overweight persons may inherit both the tendency to heaviness and a greater susceptibility to the effects of salt, or that in eating more, they simply use more salt. It also could indicate that persons already hypertensive have a greater need for salt.

They concluded that while salt intake may be an essential factor in high blood pressure, it alone is not enough to cause the disease. The report was made in the October Archives of Internal Medicine, published by the American Medical Association.

The Symptomatic Treatment of Asthma

WYNDHAM B. BLANTON, M.D.
Richmond, Virginia

I.

AS BACKGROUND to the discussion of this subject, I should like to remind you that although the concept of allergy is relatively new, the word allergy is very old, and, through the ages, the remedies that have been prescribed for it are more numerous perhaps than for any other chronic disease. In the *Commentary* of Francis Adams on the seven books of the Seventh Century Paul of Aegina, the drugs and the procedures advocated by him and his predecessors are to be found. The drugs, in summary fashion, are squill, pepper, wormwood, opopanax, storax, sulphur, oxymel, myrrh, natron, opium, horehound, gum ammoniac, millepedes, assafœdita, arsenic, cardamon, hydromel, mustard, laserwort, ammoniac perfume, pine, southernwood, poley, spuma nitri, aphronitum, and castor. Other measures advocated were fomentations, fumigations, purges, blisters, cupping, bleeding, rubifacients, clysters, the cautery, burning of the head, burning balls of cotton on the chest, cold baths, friction, exercise and a long journey.

Now Paul of Aegina wrote twelve hundred years ago. Robley Dunglison, first professor of Medicine in this institution, (the University of Virginia), wrote one hundred years ago. In his *Dictionary*, you will find practically every one of those measures still surviving. Now, if you will notice the drugs that are underscored in the succeeding lists, you will find that many of them have survived even down to the present time, indicating the antiquity of some of our present therapeutic procedures.

My grandfather graduated in medicine more than a century ago. He followed the treatment of asthma advocated by his preceptor at Jefferson Medical School, George B. Wood. In his *Textbook of Medicine* published in 1847, Wood classified asthmatic therapy under emetics, antispasmodics, and narcotics; advised *ipecac,* lobelia, *stramonium, tartar emetic,* squill, colchicum, *ether,* musk, *morphia,* coffee, hydrocyanic acid, quinine, tobacco, and assafœdita, aided by rubifacients, cupping, leeching, holding the breath, burning nitre paper, the galvanic current, a dash of cold water, inflation of the lungs with a bellows, and a voyage.

My father graduated in medicine in 1881, one year before Henry Salter's classic description of asthma appeared in an American edition. In this work, Salter recommended *stramonium,* assafoedita, dracontium, Indian hemp, *ether,* belladonna, bromides, *sulphur, opium,* quinine, antimony, *ipecac,* lobelia, tobacco, *chloral hydrate,* chloroform, *tartar emetic,* squill, amyl nitrite, hot coffee, *potassium iodide,* ammonium iodide, *hydriotic acid,* potassium chlorate, *arsenic,* alcohol and hyoscyamus. He also advised breathing exercises, burning nitre paper, inhalations of compressed air and ammonia vapor, changes of residence—this recommendation runs through the whole picture. Proper posture during an attack was the particular contribution of Salter.

In 1914, while I was a medical student, Sir William Osler published his *New System of Medicine.* The drugs and procedures recommended in this volume were *morphine,* belladonna, *stramonium,* lobelia, heroin, *chloral hydrate,* amyl nitrite, tobacco, *potassium iodide, arsenic, oxygen,* and cocaine; inhalations of steam, benzoin, turpentine, ammonia, ether, and chloroform; fumes of medicated cigarettes and papers, hot hand and foot baths, the foradic current to the back of the neck, and psychiatric consultation. Noteworthy in this therapeutic armamentarium is the absence of epinephrine, ephedrine, aminophylline, although adrenalin preparations were advised for local use in the nose.

The multiplication of drugs and remedies recommended in asthma continued. Leon Unger, in his textbook on asthma, published in 1945, suggested thirty-odd non-specific therapeutic alternatives. John Sheldon, in a more recent book, gives an impressive list of the up-to-date proprietary remedies now on the market. To appreciate the number and range of them, reference must be made to his excellent text. I am glad to call your attention to the presence in it of Dr. Swineford's own quadrinal. It is a very good preparation.

A review of all the articles on the therapy of asthma in the *Annals of Allergy,* and in the *Journal of Allergy* in the last two years, not counting the reports on the use and experience with cortisone and

WYNDHAM B. BLANTON, M.D., *Professor of Clinical Medicine and Chief of Allergy Service, Medical College of Virginia.*

ACTH, reveals more than two dozen such papers. These recent papers discuss the use of nitrogen mustard, orthoxin, pregnenolone, lobeline, the flavonoids, oral procaine, neosuprel, nephalin (pediatric), dainite, cardalin, eskel, ambodryl, triode, piromen, visammin, *sulphur* and prantol.

We must remember that the process of elimination is constantly going on, and that many drugs and procedures are still being discarded after fair and adequate trial. A few that have gone into the discard in recent years are hapamin, lipiodol, ethylene disulfonate, histamine, histaminase, ascorbic acid, ultraviolet irradiation of the blood, x-ray of the lungs and spleen, the intravenous use of alcohol.

It is difficult for one who treats asthma to escape the nostrums. Newspapers, radio, drugstore shelves, the asthmatic patient himself forcibly remind the physician of their existence and their widespread employment. Patent medicines sold for their effect on asthma depend for their action upon such ingredients as stramonium, the nitrites, iodides, and arsenic. Other ingredients are largely inert. Unger, in his book, lists seventy-six such preparations and points out the danger inherent in self-medication with expensive, often habit-forming drugs, which may in themselves become sensitizers, and by delaying the decision of the patient to consult a doctor, permit the progression of a disease otherwise reversible in its early course.

II

Present day symptomatic treatment of asthma, fortunately, is based upon a better knowledge of the pathological physiology of the disease and on the possession of a battery of pharmacologically active drugs. It is important to remember the objectives and the limitations of symptomatic treatment. This essential part of the treatment of asthma is (1) not a substitute for avoidance or specific therapy; (2) is useful while awaiting the effect of other measures; (3) is a helpful adjunct to other measures; (4) may be employed as a palliative when other measures fail; (5) finally, is indispensable in emergencies.

What are the symptoms we are called upon to combat in the treatment of asthma, especially in intractable asthma and in status asthmaticus? They may be summarized as (1) fear, nervousness, insomnia and exhaustion; (2) dyspnea from obstructed air ways, (a) by secretions (mucus or pus), (b) by a narrowed lumen due to thickened walls (edema, exudation or congestion), or to spasm of the bronchial muscles; (3) cough from secretions, edema or congestion; (4) dehydration and starvation; (5) cyanosis; (6) the manifestations of the complications of asthma.

It is helpful to recall a few theories which are basic to treatment. *First:* vagus stimulation causes spasm of the muscles of the smaller bronchi, vasodilatation and increased secretions, chiefly from the larger bronchi. Vagus stimulation may be central, truncal or peripheral. *Second:* sympathetic stimulation causes the reverse of what has been above stated. *Third:* it has to be borne in mind that there are such factors as the presence of cholinergic fibres capable of producing effects similar to those of adrenalin or epinephrine. *Fourth:* the basic concept —the antigen-antibody cellular reaction, which Dr. Swineford discussed so thoroughly this morning, with the liberation of the so-called H-substance, the predicated chief cause of bronchial spasm, mucosal edema, swelling and secretions.

What then is our therapeutic armamentarium? Briefly stated, it consists in the employment of sedatives, antispasmodics (sympathomimetics), expectorants (nauseants), antibiotics, sulfonamides, cortisone, ACTH, breathing exercises, perhaps oxygen and helium.

Suppose we begin with the sedatives. At the head of the list stand the barbiturates with phenobarbital as a typical example. They are our stand-bys. Chloral hydrate may be employed in either an aqueous solution or in a gelatin capsule. It does not sensitize and deserves wider use. Paraldehyde, orally, or rectally, never intramuscularly, is a quick, effective and safe drug that should be tried when simpler measures fail. Seconal, nembutal, amytal and similar drugs have their place as hypnotics; occasionally, for their sedative effects. Demerol, orally or intramuscularly, is sedative, antispasmodic, and anticholinergic, but, like morphine, it is not without its dangers. Ether has proved helpful in terminating many attacks of status asthmaticus. But whether given by mouth or by rectum it should be given to full anesthesia to get effective results.

Considerable experience and judgment are required in the use of the sedatives in the treatment of asthma. The skilled therapeutist will sail cautiously between the Scylla of uncorrected emotional and nervous factors, and the Charybdis of suppressed cough and an insensitive respiratory center occasioned by the over-zealous administration of depressing drugs.

Now for a glance at the antispasmodics—the sympathomimetics. Epinephrine is at the head of this list. As you are aware, it may be given subcu-

taneously, intramuscularly, intravenously or intrabronchially. It is still in my estimation the most valuable drug in the treatment of asthma. Although it can be given in a number of ways, unfortunately it cannot be given by mouth. In modified form we have susphrine, effective in small doses with prolonged effect and devoid of some of the side reactions of epinephrine. For a number of years ephedrine has been generally employed in the treatment of asthma administered orally or by hypodermic injection. Its chief advantage is its oral effectiveness, but it is slow and produces nervousness which has to be counterbalanced by combining with it various sedatives. Isuprel is employed in linguets or by aerosol, but it cannot be counted upon except in the milder cases of asthma. Aminophylline lends itself to a variety of methods of administration, being effective orally, intravenously, by rectal instillation, or in rectal suppositories. Until recently its administration by mouth has been disappointing, but, fortunately we now have cardalin and dainite combinations containing aluminum hydroxide and ethyl amonobenzoate enabling us to give without side effects doses as large as five grains.

Now for the expectorants and the nauseants. Out of a long list we must limit ourselves to a few effective drugs. Potassium iodide should head the list, employed in doses of from 5-20 grs., three or four times a day, after meals, in a full glass of water or a glass of milk. Sodium iodide may be equally good, used, of course, intravenously; but there is never in my estimation, or rarely, any use for the intravenous medication with the iodides since iodine by mouth is so readily absorbed. Ammonium chloride in uncoated 5 gr. tablets ranks next. The uncoated tablet, because of its nauseant effect on the stomach, is preferred. Hydriotic acid in syrup form is popular in pediatric practice in dram doses three or four times a day. Our pharmacologist tells us that it is a respiratory depressant and should not be used. Expectorants which are classified as nauseants include ipecac, the syrup of which is given in 0.5 gm. doses; tartar emetic (Syrup of Squill) gr. 1/20-1/10; and apomorphine, gr. 1/30 by hypodermic injection.

Useful expectorant mixtures that have recently come on the market are benadryl expectorant, pyribenzamine expectorant, and phenergan expectorant. We have little use for the popular preparations of a generation ago—Stokes' mixture, brown mixture, or Coxe's hive syrup.

We come next to a discussion of the inhalants, the so-called mucolytic agents. Steam is, of course, an old-fashioned method of obtaining the desired end. It may be inhaled with or without benzoin or other substances. Some allergists I know oppose the use of benzoin altogether. Alevaire, an aqueous solution of triton, is a detergent effective in lowering viscosity, as it thins mucopurulent exudates. It is administered by an aerosol nebulizer capable of delivering a fine mist. It is supplied in bottles containing 500 cc. which is usually enough to last twenty-four hours. It may be employed alone or as a vehicle for other agents but never with terramycin. Tryptar, the Armour Laboratories preparation, is a pure crystalline form of trypsin, and may be administered trans-orally by tube or by mask, 15 minutes at a time, once or twice a day. It is supplied in packages containing 125,000 units of trypsin per vial with an ampule containing 3 cc. of diluent.

We have now to consider the antihistaminics, of which there are a great many—thirty-odd to be exact. They are administered orally, in doses of from 4-100 mg. three or four times daily; or by aerosol, theoretically the most effective method, since it brings the drug directly into contact with the shock organ; or by injection—there are six which are injectable (thephorin, 12.5 mg.; decapryn minergic 5 mg.; dexapyramine (vitamix) 25 mg.; pyribenzamine 25 mg.; histadyl 20 mg.; benadryl 10 mg.). It is to be remembered that the intravenous effect of these drugs is supposed to be largely one of sedation. We do not employ them in this manner. If one is going to use these preparations, one should remember that chemically and pharmacologically they fall roughly into four classes, with benadryl, pyri-benzamine, chlor-trimeton, and thephorin as examples of each class, and in practice one should try each in succession before deciding which class is most effective and most devoid of side reactions. On the whole, it should be said that the antihistaminics are not for asthmatics. In our experience they are disappointing, being only from 0-50 per cent effective at best. They may actually prove harmful by drying the mucous membranes.

We have at our command two additional powerful agents, remarkably effective in the treatment of asthma—cortisone and ACTH. Cortisone is available for oral use in 5 and 25 mg. tablets; for injection in aqueous suspension in two strengths—1 cc. containing 25 mg., and 1 cc. containing 50 mg. It may be employed in one of three ways—in an emergency as in status asthmaticus when descending

daily doses of 300, 200, 100 and 50 mg. may be given; or intermittently in recurring asthmatic attacks, varying the dose according to the severity of the attack; or continuously in intractable asthma. In this manner it has been given for one or two years daily, in 50-100 mg. doses, with good results. In a Boston experiment 90 per cent of the patients so treated remained in a satisfactory state of health with few side effects. The chief difficulty in the prolonged use of cortisone lies in the identification and management of concurrent infections.

ACTH is equally effective in the treatment of asthma. It may be given intramuscularly in 25-50 mg. doses every 6 hours; or as HP ACTHAR Gel which is now getting to be a popular method. This new preparation is easily administered in 20-40 mg. units per cc. once a day. With improvement, the necessity for injections becomes less frequent so that one or two a week suffice for maintenance therapy. ACTH may also be given intravenously by continuous slow drip in doses of 10-20 mg. every 24 hours. Both of these agents, cortisone and ACTH, act dramatically. We prefer cortisone because it can be given by mouth.

Cough has been referred to as a troublesome symptom in asthma. The allergic cough is due, as other coughs are, to stimulation of the afferent nerve endings by secretions and/or mucous membrane swelling. We presume the most sensitive area in the tracheo-bronchial tree is the bifurcation of the trachea, but of course cough can originate in the pharynx, the larynx, the trachea, the bronchi, the lung parenchyma, or the pleura. There are three kinds of cough that we are interested in now—the cough of allergic tracheitis, which is usually preasthmatic, usually occurs in children, and usually occurs at night; codeine is not advocated, but ephedrine, or one of the antihistaminics, is. There is the bronchial cough in which the patient tries to cough himself *out* of an attack of asthma. Here codeine should not be given, but epinephrine, ephedrine, the iodides, or the antihistaminics. Finally, there is the bronchial cough in which the patient coughs himself *into* an attack of asthma, and here codeine *is* the drug of choice.

It is necessary in the successful treatment of asthma to take into account some further considerations. First, the type of disease—whether or not it is the atopic type of asthma or whether it is the infectious type of asthma. Treatment has to be directed according to the etiology. We have also to consider the severity of the disease and to be guided by whether we are treating the patient during an attack or between attacks, and if during an attack, whether it is a mild, a moderate, or a severe attack such as status asthmaticus. Finally, we have to give consideration to the complications of asthma.

And now a last word of caution. Morphine and its derivatives—never! And this includes demerol. Aspirin, only to non-sensitive patients. I should say that in the employment of drug therapy in asthma one should always be careful to discover in advance whether or not the patient is sensitive to that particular drug by giving it in small quantities. Oxygen has disadvantages that outweigh its advantages, and should be reserved for cyanosis only.

The results of symptomatic treatment I should say are goods: they are very good sometimes, but they parallel the diagnostic ability and the therapeutic skill of the doctor and, not least in importance, the cooperation of the patient.

Don't Let Those Tax Forms Get You Down!

If higher mathematical equations . . . dates like April 15 . . . or mountains of tax forms . . . get in your hair, doctor, watch for the series of helpful articles on taxes appearing in the *Journal* of the AMA during January and February. Prepared by the Law Department staff, these articles especially pinpoint the changes in the internal revenue code as adopted by the 83rd Congress. These articles later will be incorporated in a handbook on taxes which will be available from the Law Department.

Treatment of Sinusitis in Patients with Asthma

G. S. FITZ-HUGH, M.D.
Charlottesville, Virginia

TIME does not permit a discussion of the symptoms and signs of sinusitis as related to asthma, the bacteriology and immunology of the sinuses, and the histopathology of the nose and paranasal sinuses in allergy. It should be mentioned, however, that the pathologic changes in the membranes of the nose and sinuses will be mainly edematous and cystic as the result of allergy, with, possibly, some additional degenerative manifestations in certain cases. Superimposed or initial infection may, of course, alter the picture.

My discussion will be limited to brief remarks in regard to the treatment of rhinitis and sinusitis associated with asthma. One basic concept must be recognized, which is, that asthma is not the cause of sinusitis, and, in turn, sinusitis is not the cause of asthma. In many instances, the two problems must be solved together, realizing that often the sinusitis and asthma are caused by the same factors.

There are differences of opinion concerning the incidence of sinusitis in asthmatics and in those patients with an allergic rhinitis. When we examine the literature, we find some who state that the incidence is low, and others who believe it is high. Reasonable and accurate figures show the occurrence of gross changes in the mucous membranes of the nose and sinuses, in patients with nasal allergy without asthma proper, to be high, say, 85 to 90 per cent. Again, a fair and reasonable figure for the incidence of gross membranous changes in the sinuses of all asthmatics, infectious and non-infectious, would be near 75 to 80 per cent. In other words, there will be some sinusitis associated with asthma in 75 to 80 per cent of the cases.

TREATMENT OF SINUSITIS
IN PATIENTS WITH ASTHMA

SLIDE 1
NON-SURGICAL TREATMENT OF RHINITIS,
SINUSITIS, & PHARYNGITIS

Desensitization
Antihistamine Therapy
Vasoconstriction
Hormonal Therapy
Antibiotics & Sulfonamides
Irradiation
Miscellaneous Drugs

G. S. FITZ-HUGH, M.D., *Professor of Otolaryngology, University of Virginia.*

After these preliminary remarks, I should like to begin that part of this discussion to which I have been assigned: the treatment of rhinitis and sinusitis associated with asthma. Please refer to the first slide or chart.

Desensitization: This form of therapy, as far as we, the otolaryngologists here, are concerned, is the responsibility of the allergist. We refer our patients requiring this treatment to the allergists, and take no active part here, except occasionally to administer the recommended injections.

Antihistamines: We have found antihistamines to be very beneficial, and these drugs are freely prescribed, particularly in the nasal allergies. They certainly, in many instances, give comfort to the patient. We also use antihistamines in cases with nasal complaints, but with no obvious allergy. They are given as a trial therapeutic test, and one is sometimes surprised with the good results obtained. Actually, I prescribe antihistamines in the treatment regime of plain common coryzas, on many occasions with good effects. Scientifically, antihistamines have been shown to be of no value in influencing the course of a viral infection; but, undoubtedly, in many of those infections, an element of allergy exists, and the antihistamines are of aid in controlling this. Also, as far as I have been able to determine, no harm results from the use of an antihistamine in coryzas.

Vasoconstrictors: A word of warning should be noted here. Nasal drops containing drugs causing vasoconstriction of the vessels of the nasal mucous membranes are used too frequently. The rhinologist, considering the physiology of the nasal mucous membranes, prefers an aqueous vehicle containing a moderate vasoconstrictor, such as a solution of neo-synephrine ¼%, or ephedrine sulphate 1%. There are many other nasal constrictor solutions on the market that have little or no advantage over those mentioned. Many drugs are incorporated in the various nasal solutions, such as antibacterials, hormones, and antihistamines; their value is questionable. Anyone considering nasal physiology and pathology will be aware of the limitations in the effectiveness of topical medications. Again, one must consider the possibility of becoming addicted to nasal medications. In addition, certain patients

develop a sensitivity to nose drops, resulting in a so-called "kick back" reaction to the drops, which is severer than the initial reaction. Often by administration of an antihistamine and barbiturate, especially at night, plus abstinence from the use of nasal drops, one may accomplish good results in a few days, in troublesome cases of vasomotor and allergic nasal congestion. Any nasal medication should be prescribed for a stated and limited period.

Hormone Therapy: The use of cortisone and ACTH, administered orally, is particularly helpful in interrupting an acute attack of allergic rhinitis. We have utilized cortisone very successfully in this manner. We do not use, or advocate the use of, cortisone for injection into the nasal structures or nasal polyps. Investigations have shown that this method of therapy is of no value, and actually is dangerous. One hundred mg. of cortisone may be given three times a day, gradually decreasing the doses over a period of five to seven days, to tide a patient over an acute period of nasal discomfort.

Antibacterial Drugs: These medications are extremely helpful at times. If uncontrolled or partially controlled nasal allergy and asthma exist for any length of time, suppurative sinusitis and pulmonary infection will surely supervene as the result of edema and stasis of the mucous membranes. An acute attack of sinusitis and pneumonitis, responding to the anti-allergic regime and antibacterial drugs, will not become chronic. Antibacterial drugs must be given in adequate amounts over a prolonged period of time.

Irradiation: X-ray irradiation of the mucous membranes of the sinuses, in low grade, subacute, and chronic sinusitis, is recommended in certain cases. This has been, in my experience, a more useful form of therapy in children than in adults. It is administered to those patients who have not responded to conservative treatment and who do not present clear enough indication for surgery. The good results from irradiation therapy are often only temporary.

Miscellaneous Drugs: This group has been discussed by a previous speaker, I will not consider these drugs except to mention that I have obtained results in children with mild to moderate nasal allergy and asthma, with the use of a calcium and iodine preparation, administered orally.

Now, let us go on to the next slide and chart dealing with the indications for sinus surgery in asthmatics.

Number one, pathologic changes in the sinuses

Treatment of Sinusitis
in Patients with Asthma

Slide 2
Indications for Sinus Surgery
in Asthmatics

1. Pathologic changes in the sinuses requiring surgical treatment upon their own merits.
2. Minor to moderate sinusitis—persistent asthma not responding to prolonged conservative treatment.
3. Cases in which minor nasal procedures have been of definite benefit, e.g., sinus lavage, polypectomies.

requiring surgical treatment on their own merits. This means that if sinusitis is present and surgery is necessary to obtain improvement, then it should be performed, regardless of the presence or absence of asthma. Of course, asthma, if present, is given full consideration.

Another group of cases encountered consists of those with a minor to moderate degree of sinusitis and, in addition, persistent asthma which has not responded to prolonged, conservative, or medical treatment. In some of these instances, the allergists and we, the otolaryngologists, believe that we are justified in advising rather extensive sinus and nasal surgery. This is especially true if it has been repeatedly shown that the patient has improved temporarily after such minor procedures as sinus lavage, displacement therapy, nasal cleansing, and polypectomy.

The selection of patients for nasal and sinus surgery is done very carefully, and only after a prolonged period of observation, measured in months or several years, by the allergist and otolaryngologist.

Some will want to know of the accomplishments of surgery upon the patients with nasal allergy and asthma. As the result of our own experience here and of those elsewhere, I have accumulated certain figures that may be of interest.

Following minor rhinological surgical procedures in asthmatics, a few cures and improvement in perhaps 75 per cent of the patients may be anticipated.

In the cases of major or more extensive surgery, a fair estimate will be 50 per cent improvement in the asthma and rhinosinusitis. The asthma will not be improved in 50 per cent of the patients treated medically and by additional extensive surgery. It is also estimated that in this group of 50 per cent showing no improvement, there is the possibility that the asthma may be aggravated in 18 to 20 per cent.

Another figure which is of more interest to the rhinologist is that in approximately 65 per cent of the cases, the nasal and sinus condition is improved, disregarding the influence, favorable or unfavorable,

upon the asthma. In 30 per cent, the results of surgery upon the nose and sinuses will be indifferent; and in 5 per cent, the condition of the nose and sinuses will be aggravated.

The above figures are useful in any discussion with the patient and referring physician, in regard to contemplated rhinological surgery, with or without asthma.

In order that one may be somewhat familiar with the rhinological surgical treatment of these conditions, consideration will be given these procedures briefly in Slide 3.

Treatment of Sinusitis
in Patients with Asthma

Slide 3
Nasal & Sinus Surgery

I. Minor—single or combinations
- Lavage
- Polypectomy
- Antrostomy
- Middle Turbinectomy
- Submucous Resection
- Inj. Sclerosing Agents

II. Major—single or combinations.
- Ethmoid—Exenteration
  - Intranasal approach
  - External approach
- Antra —Removal of Lining Membrane
  - External approach
- Frontal —Removal of Lining Membrane
  - External approach
- Spenoid—Partial Removal of Membrane–Window
  - Internal approach

Minor procedures, single or in combinations, such as lavage of the antra and, less often, the frontal and sphenoid sinuses, are helpful therapeutically and diagnostically. The relief of nasal and sinus obstruction, by submucous resection and polypectomies, is well recognized by all as being beneficial. Windows into the antral cavities, and, occasionally, the sphenoids, will do much to improve drainage and diminish the pressure from and within these areas. Middle turbinectomies, once so popular, have justifiably given way to a more conservative method of reducing the size of these structures—submucous resection of the turbinate. The use of sclerosing agents and the cautery upon hypertrophied mucous membrane and polyps has not had an enthusiastic following here in our group, but has been carried out with favorable results by some rhinologists elsewhere.

Major procedures, usually in combinations, will be commented upon briefly.

The cells of the ethmoid sinuses may be completely and safely removed, with or without a middle turbinectomy, by the external approach. A less complete operation may be performed by the intranasal method.

The diseased mucous membranes of the antral cavities are easily removed by the intraoral approach, through the anterior wall of the sinuses. Operations upon the ethmoid and maxillary sinuses are uniformly successful.

Some difficulty is encountered in obtaining a good result after removal of the diseased membrane, in the event of frontal sinusitis. Retaining the patency of the nasofrontal duct is the difficult problem here.

As a rule, all that one can accomplish, as far as the sphenoid sinus is concerned, is improved drainage by a window procedure in the anterior wall, because of the anatomical inaccessibility of these cavities.

In exploring the sinuses, one looks for and removes only that tissue which appears to be so diseased that the possibility of recovery, even with improved drainage, is impossible. Islands of only slightly diseased tissue may be left *in situ*, to aid in the regeneration and relining of the cavity. At best, the lining that is replaced by nature cannot approach a normal one.

Treatment of Sinusitis
in Patients with Asthma

Slide 4
Lymphoid Tissue — Pharynx

1. Surgical Removal
2. Irradiation
3. Actual Cautery

In Chart or Slide 4, mention is made of lymphoid tissue in the pharynx. Indirectly, this tissue must be considered in the treatment of asthma complicated by infection in the sinuses, because it has a definite effect upon the development and progress of sinusitis. This fact is particularly true in children. It is desirable in certain cases, in order to influence favorably the course of sinusitis, that as much of this tissue be removed as possible. This is accomplished by surgery, x-ray, and radium irradiation, and sometimes by use of the actual cautery.

In conclusion, a few comments are made with reference to the otolaryngologist's approach to the problems of the treatment of sinusitis and asthma. The methods used here at the University of Virginia Hospital are briefly outlined.

The Treatment of Atopic Asthma

JOHN L. GUERRANT, M.D.
Charlottesville, Virginia

THIS discussion is on the specific treatment of asthma that is due to sensitivity to foods, inhalants, and other allergens. At the moment we are not interested in symptomatic treatment. We are not interested in asthma due to infection, nor are we interested in asthma due to nervous tension.

Before treatment, it is imperative that we recognize the specific allergens that are important. This can be done by means of a well taken history, by well done skin tests properly interpreted, by use of trial elimination diets, and by trial periods of avoidance of suspected inhalants. When allergens are identified, there are two effective methods of treatment. First, one can avoid the important allergen. Or second, one can desensitize the patient.

As a rule, atopy is easier to control than infection or nervous tension. It should be possible in most cases to recognize all the important allergens and either remove them from the patient's environment or decrease his sensitivity to them so that they will no longer give severe symptoms. When possible allergens should be avoided.

Let us consider foods first. In general, foods are not a very important cause of asthma, especially in adults. However, food allergy is not uncommon in children. It is occasionally important in adults. It should always be looked for. Suspected foods should be avoided completely for a trial period. They should be re-introduced one at a time every few days after a period of trial avoidance. Those that consistently cause symptoms should be avoided indefinitely. Some allergenic foods can be eaten occasionally or in small quantity without producing symptoms. Others may be eaten cooked when they produce symptoms if eaten raw.

Inhalants are very common causes of atopic asthma. As a rule they are fairly easy to recognize. Whenever possible, important inhalants should be removed from the environment of the patient. If it is not possible to remove them entirely, then contact should be kept at a minimum. There are a number of inhalants. Perhaps the most important and the commonest one is ordinary house dust. One may get into dust at home or at work. The home dust can be partly controlled by using dustproof mattress and pillow covers, or by using a foam rubber mattress and pillow, and by removing upholstered furniture, draperies, rugs, curtains, and chenille bedspreads from one's bedroom. Patients who are sensitive to dust should avoid barns, mills, thrashing machines, and other dusty occupations. Cosmetics should be avoided or non-allergic cosmetics used. Mold spores are important inhalant allergens. One can avoid them by removing moldy furniture, by drying up basements, by avoiding rotting leaves and other rotting vegetation, and, in general, staying away from moldy places. Molds are sometimes very difficult to get rid of, particularly if the patient has an old and damp house. Epidermals are also important inhalant allergens. Feathers are most important for most people. They can be avoided by using foam rubber pillows or by putting a dustproof cover on one's pillow. Other epidermal inhalants should be kept out of the environment of patients having asthma or hay fever if possible. Dogs, cats, and other pets should be kept out of the house. Pollens are important seasonal allergens. Unless one can leave home during the pollen season, avoidance is not very successful. Air-conditioning is fine if the patient can stay in the air-conditioned room. There are not many patients, however, who can go into an air-conditioned room and stay there. Insect sprays and either tobacco smoke or other smoke seem to be allergens at times, but they are more often non-specific irritants.

When it is not possible to avoid inhalant allergens that cause important symptoms, an attempt at desensitization should be made. I call your attention to two things in that statement: First, desensitize people only when they cannot successfully avoid the allergen. Second, only attempt desensitization to inhalants that cause important symptoms.

In 1910, Dr. Noon, in London, began injecting minute amounts of a saline extract of grass pollen into individuals who had early summer hay fever. He demonstrated that the sensitivity of these patients to grass pollen would be decreased as demonstrated by conjunctival tests. Interestingly enough, when Dr. Noon made his first report, none of his patients had been through a pollen season. The only thing he demonstrated was that the conjunctival test was less active. He hoped that these patients would

afford material for a later report. Evidently these patients did well because ever since then doctors have been injecting all sorts of things into people with hay fever and asthma. Soon after his original report, Dr. Noon died with pulmonary tuberculosis. His assistants carried on his work. His name still comes to us in the Noon Unit which is often used in designating pollen dosage.

Dr. Noon did demonstrate that some sensitive patients can be made less sensitive by repeated subcutaneous injections of minute but increasing amounts of a saline extract of appropriate allergens. This important principle still stands. Since his time innumerable reports have been written about desensitization. To the present, however, there is still little agreement on the details of this procedure. Authorities disagree on the methods of preparing extract, on the active ingredients, on the size of the dose, on the duration of treatment, on the interval between doses, the mechanisms involved in producing desensitization, and on the value of this form of treatment.

I shall not discuss the merits of any of the desensitization programs. I shall describe the procedure that we follow here. I am sure that every experienced allergist in the room has a different program that works better for him.

Let us consider first the patient who has uncomplicated hay fever and asthma from ragweed pollen. The following steps should be carried out:

1. Establish the diagnosis by history and by skin tests or conjunctival tests.

2. Begin preseasonal treatment as soon as the diagnosis is made.

3. Start with a dilution of the pollen extract that will probably not give a reaction. This varies from 1 part in 3,000 up to 1 part in several million.

4. The first dose of the first dilution should be 0.05 cc.

5. Increase the size of each dose by 0.1 cc.

6. When a dose of 0.5 cc. has been reached, increase the concentration of the extract tenfold and repeat the same procedure until a dilution of 1 part in 33 has been reached.

7. Increase the size of the dose of the 1 to 33 dilution until a dose of 1 cc. has been reached.

8. Give injections often enough to reach the desired maximum dose by August 15.

9. During the pollen season give 0.1 cc. every two weeks.

10. After the pollen season, start the perennial treatment by continuing the 0.1 cc. dose every two weeks.

11. Five months before the next season, start increasing the size of each dose by 0.1 cc. so as to reach a 1 cc. dose at the beginning of the pollen season.

This program will have to be altered many times to suit individual patients. Patients who start too late may not reach the ideal dose. Reactions may slow up the program. Patients who miss injections longer than 3 weeks should have the dose reduced. Patients who come in first during the pollen season or who develop symptoms in spite of preseasonal treatment should have co-seasonal treatment.

The same procedure is followed for other pollens, making allowance for the difference in dates. We try to reach the maximum dose for grass pollen on May 1, and the maximum dose for most tree pollens in March or April. When a patient gives reactions to several important pollens occurring at the same time, all may be included in the treatment mixture. We usually treat May and June patients with a mixture of grass and plantain pollen. We usually include a small amount of goldenrod, cocklebur, and corn pollen extract in the mixture for patients with August, and September symptoms.

Patients with perennial asthma may be treated with injections of the perennial inhalants. Common ones are house dust, feathers, other epidermals, fungi, kapok, orris, linters, and feeds. A treatment mixture for each patient is based on his history, environment, and skin tests. One should usually start with a dilution of 1 part in 600 to 1 part in 10,000. The injections are usually given twice a week. We usually work up to a 1:10 or a 1:5 dilution. One should give 0.1 to 0.3 cc. of this maximum concentration two times a week, one time a week, or once every two weeks depending upon the control of symptoms. A dose big enough should be given often enough to control symptoms. The interval between doses should not be greater than two or three weeks. If symptoms are controlled with dilute material, there is no need to increase the concentration further. For perennial inhalants there is no regular seasonal buildup. The frequency of the injections should be increased during periods of intensive exposure or exacerbation of symptoms. If symptoms should develop in a patient who had previously been controlled with dilute extract, the size of the dose should be increased.

Reactions to the extracts are an ever-present danger. They may be local, focal, or systemic. Severe

reactions are usually preceded by minor ones. When reactions occur, the dose should be held to the same size or reduced unless the reaction was a minor one. Never increase a dose that causes a reaction.

Reactions can usually be controlled by the administration of an antihistamine drug, adrenalin, aminophyllin, and a tourniquet above the site of the injection.

The results of treatment are variable. Patients with a clear uncomplicated clinical history and with corresponding skin reactions will nearly always receive very satisfactory relief from the use of injections if the proper antigens are used. As one begins to treat patients with less clear-cut indications, he will have fewer successes.

If one uses much skin testing and treatment material, it is more economical to make most of the extract from foods, dusts, epidermals, pollens, etc., as they are needed. If one has need for less material, he can buy the dried, powdered allergens and make his own extract. If he prefers, he can buy concentrated extract solutions or he can even buy various treatment mixtures already made up with proper dilutions for individual patients. The following are common commercial sources of allergy supplies:

1. Powdered Allergens:
   - Abbott Laboratories, North Chicago, Illinois
   - C. G. Blatt and Co., 10810 E. 26th St., Independence, Missouri.
   - Graham Laboratories, Willow Lane, Rt. 7, Dallas 6, Texas.
   - Greer Drug Co., Lenoir, North Carolina.
   - Hollister-Stier, Wilkinsburg, Pa.; Spokane, Washington; and Los Angeles, California.
   - Lederle Laboratories, 30 Rockefeller Plaza, New York 20, New York.
   - Sharp & Sharp, 3402 Norton Ave., Everett, Washington.
   - Southwest Mold and Antigen Laboratories, 1009 N.E. 17th St., Oklahoma City 11, Oklahoma.
   - Stemen Laboratories, 1205 N.E. 18th St., Oklahoma City 11, Oklahoma, P. O. Box 6306.
2. Allergenic Extracts:
   - Abbott Laboratories, North Chicago, Illinois.
   - Barry Laboratories, Inc., 9100 Kercheval St., Detroit, Michigan.
   - Cutter Laboratories, 4th and Parker Sts., Berkeley 1, California.
   - Endo Products, Inc., Richmond Hill 18, New York. (Endo House Dust).
   - Hollister-Stier, Wilkinsburg, Pennsylvania; Spokane, Washington; Los Angeles, California.
   - Lederle Laboratories, 30 Rockefeller Plaza, New York 20, New York.
   - Parke-Davis & Co., Detroit, Michigan.
   - Wyeth, Inc., 1600 Arch St., Philadelphia 3, Pennsylvania.

What changes take place in the individual with asthma who has been treated with injections of appropriate antigens that make him less sensitive to these antigens? Dr. Mary Loveless and others have studied this problem intensively. The best explanation states that the injection of antigens leads to the formation of a heat stable or blocking antibody. This blocking antibody then inactivates the absorbed antigen, preventing a reaction between the antigen and the reagin and the production of symptoms.

The important steps in the specific treatment of atopic asthma are as follows:

1. Identify the specific allergen.
2. Avoid this allergen if possible.
3. If not possible, attempt to make the subject less sensitive to the specific allergen by injecting minute amounts of it subcutaneously.
4. During injection treatment, reactions are an ever-present danger.
5. Results will depend upon the care with which one selects his patients.
6. Treatment materials may be either made or bought.
7. Improvement seems to depend upon the production of blocking antibodies.

The Psychotherapeutic Approach to Asthma

RICHARD W. GARNETT, JR., M.D.
Charlottesville, Virginia

IT IS MY opinion that rarely, if ever, should we think of asthma as entirely psychogenic or attempt to treat it entirely by psychotherapy. By the same token, few, if any, cases of asthma are without a psychogenic element or to which psychotherapy could not be utilized with some benefit.

To quote Dr. Alexander at this point, "One of the most persistent errors in this field is the belief that if emotional etiology in a case has been established, somatic management becomes unnecessary and the patient can be turned over to a psychiatrist. This error is the reverse of the earlier misconception—namely: that if a patient has somatic symptoms, his case belongs exclusively to the domain of the physician outside of psychiatry. Psychotherapy aimed at the specific emotional factors of etiological significance is a long range project and must be coordinated with the rest of medical management. Above all, it must be correctly timed."

Fortunately, here at the University of Virginia Hospital, we have such a working arrangement. Essential agreement and mutual respect exists between the Department of Allergy and the Department of Psychiatry which has permitted a most pleasant and satisfactory relationship and the cooperative handling of many problem cases. The defects in this therapeutic approach lie mainly on the side of psychiatry—and stem mainly from two sources: the present inadequacy of our knowledge and techniques, and the lack of sufficient time to meet the needs with which we are confronted.

The first step in the psychotherapeutic approach to any somatic condition is to establish a psychosomatic diagnosis. That is to establish to what extent, if any, emotional factors are playing an etiologic role. Obviously if the condition can be handled satisfactorily by relatively simple procedures, one would not resort to the difficult, time consuming and expensive measures which are still entailed in any definitive program of psychotherapy. In saying this, I am not forgetting that, in a sense, every procedure and every contact between the doctor and the patient has some psychotherapeutic significance. That is, it has meaning and an influence on the patient emotionally, for better or for worse. However, in speaking of the psychotherapy of asthma or any other psychosomatic disease, I mean more than what is implied by such terms as a good bedside manner or the art of medicine. I mean the conscious application of fairly well known principles and techniques to correct fairly definite pathology, psychopathology, which is in this case causing or contributing to a definite somatic dysfunction or disease. To avoid any possible misunderstanding, let me emphasize that when we use the term psychogenic asthma we do not mean imaginary asthma or hysterical dyspnea, hyperventilation or any of the other respiratory dysfunctions that may simulate asthma, although such phenomena undoubtedly exist.

The pathological physiological mechanisms of psychogenic asthma are the same as in primarily allergic asthma. It is only the pathogen or the stimulus that is different and it is to this etiologic source that we direct our attention in specific psychotherapy. Another aspect of the illness is also the concern of the psychotherapist; that is the meaning, the purpose, the value that the patient's symptoms may have for him in his total personality organization and in the constellation of his environmental setting. This may sound strange to the uninitiated that a person might find it useful, or necessary, or that he may prefer to be sick. The more sophisticated speak of the "secondary gains" sometimes in a ridiculing or condemning tone. We know from experience that somatic illness, especially the so-called psychosomatic illnesses, often do serve as a defense against severe personality disturbances such as depression or a paranoid psychosis. The psychotherapist then has to evaluate the total patient and his life situation, his assets and liabilities, strengths and weaknesses, in order to understand perhaps why he is sick in the first place, or what his illness has come to mean to him, what function it has come to serve and why he may with good cause be reluctant to give it up, and may, in fact, not give it up unless he finds a better, more effective or economic way of dealing with his problems in living.

The necessity for proper timing was referred to above. The acutely ill patient must of course first be treated symptomatically. In addition to the usual

RICHARD W. GARNETT, JR., *Associate Professor of Neurology and Psychiatry, University of Virginia.*

medical procedures, the psychotherapeutic measures at this point should be conservative, supportive, cautious, permissive, indulgent; not probing, uncovering, disturbing. After the storm is weathered, the attention may be gradually focused on the basic difficulties, with the expectation that as significant areas of conflict are brought to light, symptoms will recur or increase, and the speed of treatment will have to be regulated accordingly. In most cases, medical management and psychotherapy can and should be carried on simultaneously. The aim in this type of psychotherapy is to re-expose the patient to his conflicts, bring up the repressed, unconscious, forbidden memories, attitudes, feelings; help him to desensitize himself to them, help him to discard immature, inappropriate, reaction patterns; to accept himself and others more realistically, more rationally, and to learn to live more effectively, comfortably and productively. In asthma, the focus is usually on the unresolved, repressed, ambivalent dependency on the mother figure. This often includes a difficulty in handling emotions having to do with the desire for independence and, yet, a fear of it. Hence, attitudes such as aggression, self-assertiveness, hostility, give trouble. Also behavior associated with mature independent states, such as normal heterosexual, activity, marriage, self-supporting work, etc.

But, obviously, I cannot here give a complete course in psychotherapy. The psychosomatic approach, which is necessary to good medical practice, emphasizes the necessity of not dividing the patient's problems into physical and mental but of treating them in totality. Yet, both the somatic and the psychotherapeutic techniques require specialists who cannot master both equally well. Teamwork in therapy and close cooperation between those from both disciplines is perhaps the best solution but not always practicable. Most doctors can become good psychotherapists, but he must be willing and able to learn the basic sciences of psychopathology and psychodynamics on which therapy is based.

A more efficient coordination of somatic and psychotherapeutic measures is one of the important challenges of modern medicine. It will require a more precise knowledge of the relationship of constitutional, emotional, and physiological factors in the causation of disease, and the development of improved, simplified and more easily learned techniques.

A fairly typical case seen recently for a follow-up visit may serve to illustrate some of the problems in treatment as well as some of the factors that are commonly found to be of etiologic significance. This case particularly well illustrates the team work approach we frequently use here.

Mrs. H. is a 49 year old white married woman, the mother of six children. She was admitted to the hospital on the Allergy Service in June, 1953, in an asthmatic spell that had persisted for about 2 weeks and had resisted all the usual medical measures. Here first asthmatic symptoms had begun only six months previously apparently precipitated by a cold and bronchitis. She had had a tendency to wheezing respiration since, with intermittent exacerbations of rather severe typical attacks of bronchial asthma. Physical examination revealed a moderately obese middle aged woman in respiratory distress. She appeared tense and rather depressed. There was an abdominal scar in R.U.Q. where gall bladder had been removed about one year previously. Otherwise, physical and routine laboratory examinations were negative, except for typical physical signs of bronchial asthma.

The customary procedures for relief of symptoms were instituted and the allergic work-up begun. Because there were indications of psychogenic factors, we were asked to see her in consultation on the second hospital day. As she was still rather sick, we began by chatting with her quite casually, permitting her to talk at length about her symptoms. We, of course, told her from the first that we were psychiatrists and explained that we frequently saw patients with difficulties similar to hers which were felt to be in some way caused or aggravated by nervous factors. She had been previously prepared for our visit by the allergist and by her local doctors. She remarked that all the doctors had told her that her asthma was due mainly to her nerves and that she was nervous but didn't know why. The patient impressed one as being a very passive, dependent type, rather emotionally immature, anxious to please and cooperate, but also a person with a rather fierce sense of pride and an undercurrent of hostility. As we began to get the story and build up a working relationship with her in the ensuing days it was at first rather discouraging as she insisted on maintaining a very bland picture of herself, her environment, her personal relationships and her past life. There was a definite impression of subtle but firm resistance. After about a week of daily interviews in which very little of specific importance had been gathered but in which a fairly good rapport had been established and the patient was feeling better, we challenged her to the effect that she was holding out on us,

that she professed a desire to cooperate but actually she was not being fair, that we knew difficulties such as hers including the evident nervousness and depression always had causes which could be understood, etc. She became obviously angry and upset. We left her to think it over and that night she had a bad time of it, but the next day after much protestation of her wish to cooperate, she confessed that her oldest son on whom she had leaned a good deal had moved to New Jersey and had not been to visit her even since she had been sick because she had insisted that he not be notified. We called the son long distance and asked him to visit her mother in the hospital which he promptly did. To cut a long story short, we had already gathered from her that she was a mother who was actually quite dependent emotionally on her children. She had boasted a good bit about what good children she had and how devoted they were to her, how hard she worked for them, and how she could never deny them anything. Subsequent interviews brought out that a sixteen year old daughter was inclined to be wild, rebellious, had stopped school and the patient had worried a great deal over her and was incidentally trying to control her and punish her by being sick with asthma. Then came a dramatic revelation with a great deal of emotion that she herself had been an illegitimate child, had had a very traumatic childhood and had vowed to spare her own children anything like what her own life had been. There had been very little mention of her husband except that he was a good man and would do anything in the world for her.

Finally it came out that he was 18 years older than she, that he had retired as a coal miner at the age of 65, two years ago, and just hung around the house, leaving the family—including four teen age and younger children and herself—with no income except his pension. He took little or no interest in the home or children and never wanted to take her out anywhere. She said that his health was good, that he had been a heavy drinker in the past, and when the children were young he was gone from the house most of the time. Now that she was able to get out, he just wanted to stay home.

Many of our interviews were rather stormy. We encouraged the patient to express her aggressions more openly and she learned that even after she had been difficult, disappointing or even insulting, we still came back. She stopped apologizing for everything and became less defensive. Her manner became more self-assured and dignified.

In her interview yesterday she was much more animated, and aggressive, smiled and laughed frequently, and said she had had no more spells of asthma since leaving the hospital except one lasting about a week and associated with a bad cold. She was still nervous and suffered some from insomnia. Obviously all her problems were not solved but she did seem to be a much more mature person and was essentially free of asthma.

Sound Waves to Ease Pain.

High frequency sound waves have been used to relieve the unbearable pain of patients suffering advanced malignant diseases.

Dr. P. A. Lindstrom, of the University of Pittsburgh School of Medicine, said ultrasonic radiation to seal off a small portion of the brain was used in 17 patients as a substitute for similar treatment previously undertaken by surgery. Results of the tests indicated that the technique also could replace this type of surgery in patients with some mental diseases, eliminating certain unfavorable side-effects of surgical lobotomy. There were no complications or ill effects from ultrasonic treatment, and studies of the brain showed no apparent tissue damage.

Ten of the 17 patients, who had been suffering excruciating, uncontrollable pain, had practically complete relief for weeks to months after treatment and were able to discontinue previously heavy narcotic medication. Four other patients felt decreased pain and were comfortable a good deal of the time with less noticeable and one case was a failure.

Dr. Lindstrom said a major advantage was that there was little apparent tissue damage in the brain as may occur in surgical lobotomy. He made his report in the October Archives of Neurology and Psychiatry, published by the American Medical Association.

Treatment of Infectious Asthma

OSCAR SWINEFORD, JR., M.D.
Charlottesville, Virginia

THE treatment of infectious asthma requires at least four major considerations. *One* is to look for and treat the causes of wheezing other than infection. Remember that wheezing in chronic asthma is apt to be due to allergic *and* infectious *and* other causes. This is discussed in the section on classification of causes of wheezing. *The second* is symptomatic treatment, which Dr. Blanton has discussed so nicely already. Don't forget that, while symptomatic remedies are apt to be less effective in infectious than in allergic asthma, they should be used assiduously until specific measures bring relief. *The third* is the use of antibacterial remedies. *The fourth* is immunization with bacterial antigens. The last two supply the topics for this discussion.

Infectious asthma is treated with the same antibacterial remedies, by the same routes and in the same doses which are effective in other respiratory infections. A few additional therapeutic procedures, which are especially useful in infectious asthma, will be discussed briefly.

Infectious asthma may be acute, subacute, or chronic. The acute attack is treated, like any other respiratory infection, with sulfonamides, penicillin, streptomycin, achromycin, erythromycin, terramycin and aureomycin. In this clinic the selection of these remedies is more practical than scientific. Our patients are started on elkosin immediately, one gram four times daily. Elkosin is cheap and has a very low incidence of intolerance. Other sulfonamides are probably just as effective. If cough and wheezing are not markedly reduced in 48-72 hours, achromycin, 0.25 gm. four times daily is given. If no improvement follows this in two or three days, a combination of at least 600,000 units of penicillin and one gram of streptomycin is given daily. Few patients with acute infectious asthma fail to respond to one or the other of these antibacterial remedies. The order in which these three remedies are given is entirely arbitrary. Injections of penicillin are given with increasing reluctance because it causes so many reactions, even fatal anaphylaxis.

Cultures and sensitivity tests should be made promptly in order that a specific antibacterial drug can be used if the first arbitrarily selected remedy is not effective. The reason for the prompt administration of these remedies is that respiratory infections frequently result in status asthmaticus before results of cultures and sensitivity tests can be obtained.

There are *two common errors* in the use of antibacterial drugs in acute infectious asthma. The *first* is failure to continue an effective drug until the infection is cured. One or two doses of penicillin or eight to ten achromycin pills frequently provide 50% to 75% relief of the attack, but a little residual asthma may persist for weeks or months. Whereas, if the effective drug is continued for five to ten days the attack is usually cured. The *second* common error is to continue giving an antibacterial drug which fails to initiate significant relief within two or three days. Any drug which fails to give striking relief within three days should be discontinued and another substituted. The results of the cultures and sensitivity studies should be available by then.

Sinus infection is, perhaps, the commonest single cause of acute infectious asthma. Sinus infection must be recognized and treated promptly when present. Acute infectious asthma due to sinus infection is not apt to subside quickly unless this is done.

Unless other causes of wheezing are recognized and controlled and the infection is cured, residual cough and wheezing will persist in varying degree. This is *subacute infectious asthma.* This is treated like chronic infectious asthma.

Chronic infectious asthma is apt to have infectious *and* allergic *and* other components. Infected allergic respiratory membranes, as a rule, do not respond satisfactorily to simple anti-infection procedures. Treatment of the infection must, therefore, be supplemented by management of the other causes of wheezing.

Sputum is an important problem in the management of infectious asthma. It may be tenacious and difficult to raise. It seems responsible for much of the exhausting cough. Sputum seems to protect bacteria from antibacterial remedies at times. This problem is tackled from several angles. *Potassium iodide,* one gram four times daily, is given routinely if tolerated. The impression is strong, however, that potassium iodide is more effective in keeping sputum fluid than it is in liquefying sputum which is already tenacious and inspissated. There is a

great need for more effective methods by which this sticky material can be loosened and coughed up readily.

Aerosols are used effectively to apply topical antibacterial and mucosal shrinking agents. The formula used here is 25,000 units of penicillin and 50 mg. of streptomycin in 1.0 cc. of 1:1000 isuprel, administered every two hours. This should not be used, obviously, when the patient has reacted unfavorably to penicillin or streptomycin in the past. Other sympathomimetic compounds can be substituted for the isuprel. Perhaps bacitracin, gramicidin, polymyxin, achromycin, erythromycin, and other antibacterial drugs will become more popular for this purpose than they are now. An oxygen tank, a bedside compressor, or a home-made attachment for the vacuum cleaner will provide the stream of air with which to nebulize the drugs. The mouth should be rinsed thoroughly with glycerin water before and after each treatment, to minimize oral irritation. Cough and purulent sputum which are resistant to 5-10 days of this therapy require extensive bacteriological and other procedures.

Inhalation of 125,000 units of *Tryptar* once or twice daily for a few days is often of great aid in softening the tenacious sputum.

Bronchoscopic aspiration should be employed freely when the patient becomes critically ill, before the above measures can bring relief or when they fail. Remember that the lungs of patients who die from asthma invariably show extensive plugging of small bronchi by this thick tenacious sputum. Bronchoscopic aspiration may be life-saving.

Postural drainage has been disappointing. *Nasal polyps,* which are common in infectious asthma, should be excised promptly to remove the reflex component and to make room in the nose for sinus drainage.

Status asthmaticus, which means asthma which is resistant to conventional symptomatic therapy, *is seldom seen* in this clinic *except in infectious asthma. ACTH and cortisone* have almost, but not quite, removed the fear of status asthmaticus. Few cases fail to respond to these hormones. 100 mg. of cortisone by mouth, followed by 50 mg. every 4 hours, will relieve all but a small minority of status asthmaticus within 12-48 hours. 20 mg. of ACTH given in a slow intravenous glucose drip seems to initiate relief sooner than cortisone. Treatment in critically ill cases should be started with one ACTH infusion and the first dose of cortisone simultaneously. The presence of infection is not a contraindication to the unrestricted use of ACTH and cortisone in asthma, when appropriate antibacterial drugs are used concurrently. On the contrary, the hormones seem to potentiate the effectiveness of antibacterial drugs.

Treatment of Infectious Asthma by the Injection of Bacterial Antigens. This topic is difficult to discuss because nobody really knows what happens when an asthmatic is given bacterial antigens. Do we immunize? Desensitize specifically? Or nonspecifically? Do we initiate the alarm reaction? Reams have been written, but in the final analysis, we are being empirical when we give bacterial antigens to asthmatics. They seem to help some infectious asthmatics, quite unpredictably, when other measures fail. The fact that they are used empirically does not contraindicate their use. We use them a lot.

Bacterial Antigens Should Not Be Given to Every Asthmatic. There is no reason to think they would help allergic, physical, cardiac, reflex, or obstructive asthma. Nor would they be expected to help the asthma from non-specific irritation, emphysema, fibrosis or cystic disease of the lung, unless complicated by bronchitis or bronchiectasis. Psychogenic asthma might be benefited, but distilled water would serve the same purpose. Asthma should not be treated with bacterial antigens simply because the patient does not give positive skin reactions to foods or inhalants nor because they do react to bacterial antigens. Bacterial antigens should not be used until more direct methods of treating the infection have been tried unsuccessfully.

Bacterial antigens should be given, empirically, when the infection is resistant to specific therapy and when there is evidence in the history, physical and X-ray examinations, that infection is *the* cause or *a* cause of wheezing in that patient.

Selection of the Bacterial Antigen. Having decided that the asthma is due to infection, what antigen should we use? Again we are empirical. Should stock or autogenous vaccines be used? Should soluble growth products (culture filtrates) be used? Alone? Or mixed with vaccines? There are voluble advocates of each of these choices.

Let's look at the problem. A *stock vaccine,* to be suitable for general use, must be a comprehensive mixture of respiratory and, perhaps gastro-intestinal organisms; although the gastro-intestinal ones are not often included. To get such a comprehensive stock vaccine, one would have to culture organisms from the wide variety of upper and lower respiratory

infections typical of the area from which the patient comes. That is hard to do.

The question of *autogenous vaccines* or filtrates is not as simple as it would seem. For example, the flora of the right antrum is often different from the left. These, in turn, may be different from the flora in the right and left ethmoids, or from the nasal or pharyngeal mucosae. At post-mortem in a recent case there were completely distinct flora in each of five infected sinuses. The relative importance of pathogenic *versus* saprophytic bacteria has never been settled. There is no evidence that the antigens of saprophytes are any less prone to sensitize than are those from pathogens.

To continue, the mere presence of an organism in a culture taken today does not in any way imply that the patient's asthma is from that organism. The patient who has asthma from an upper respiratory infection in November may, in March, have asthma from a lower respiratory tract infection due to completely different bacteria. So, an autogenous vaccine made in November would have little or no likelihood of influencing the asthma in March. The problem, as you see, is quite a complicated one.

The Role of Skin Tests in the Selection of Bacterial Antigens. Positive skin reactions to bacterial antigens are, if anything, less apt to be clinically significant than are those to foods or inhalants. We live in a constant barrage of bacterial antigens from birth to death. It is no wonder that most people react to some bacterial antigens. Bacteria are packaged antigens. Most organisms contain at least one polysaccharide and one nucleo-protein, probably more. The tubercle bacillus has about 10 known antigenic components. The streptococcus is perhaps equally as complex. The separate antigens of other organisms have not been studied as extensively as these two. Skin tests with vaccines elicit delayed reactions typically, presumably because the antigens are packaged and have to be "unwrapped" in order to produce reactions. The nucleo-protein fractions of bacteria elicit delayed reactions typically. On the other hand, polysaccharides tend to produce immediate wheal and flare reactions, indistinguishable from those due to dusts, pollens, and foods.

As with other antigens, skin tests to bacteria represent diagnostic leads, the significance of which is difficult to determine. In the case of bacteria, avoidance is not practical. However, (1) *clinical improvement* following (a) successful treatment of infection or (b) injections of the bacterial antigens, or (2) *an exacerbation* of symptoms after an overdose of the antigen are thought to be good evidence that the bacteria involved are likely causes of the asthma.

Practical Considerations. We pool the vaccines plus the filtrates from 72-hour broth cultures from a large number of organisms to make our stock bacterial antigen. This mixture is used routinely in those patients whom we treat with bacterial antigens. After about 4 months of injections, autogenous vaccines may be added when the response has not been satisfactory. This program is highly empirical. We have no evidence that it is superior to that employed by other allergists.

Commercial vaccines are, probably, just as effective. We would prefer them, for convenience sake, if they could be made to order inexpensively.

Treatment with bacterial antigens is guided by the same principles which Dr. Guerrant outlined for injection therapy of allergic asthma. Start with small, dilute doses which are increased twice a week. *A word of caution is necessary.* We start usually with a 1:1000 dilution of our stock bacterial antigens. Commercial vaccines should be similarly diluted. The initiation of treatment with undiluted commercial vaccines may be dangerous. Troublesome exacerbations of asthma have followed 1:10, 1:100, and rarely, 1:1000 dilutions of our stock antigen.

Desensitization vs. Immunization. What happens when we inject bacterial antigens into infected asthmatics? We don't know. It has been pointed out (1) that small subreacting doses seem to saturate antibodies and thereby prevent subsequent reactions to antigens; (2) that recovery from severe reactions leaves animals resistant to the specific antigen; (3) that active immunization protects against doses of antigen which would kill the sensitized animal. We don't know whether bacterial antigens benefit infectious asthma by one of these or by some unrecognized mechanism.

Regardless of the mechanism involved, a worthwhile percentage of *infected asthmatics seem to be benefited by injections of bacterial antigens.* Clinically, injections seem: (1) to prevent bronchial reactions to antigens absorbed from infected sites in the upper respiratory tract, the bronchi, or less frequently, in other systems; (2) to ameliorate the effects of invasion of bacteria from the outside or infected areas; (3) to help to cure or suppress the infection.

Treatment with bacterial antigens is, at best, *a compromise* with the more desirable aim of curing

the infection. Unfortunately, this compromise is frequently necessary.

The *literature* on the treatment of asthma with bacterial antigens, while extensive, is pitifully inadequate. This conclusion is based on a review of about 30 reports on the results of treating a total of 1708 cases. About one-third of these were reported as being well, while another third were significantly improved. The rest were not improved. Empiricism was really rampant. For example, there was a complete lack of uniformity in the choice of antigens (soluble bacterial products, stock *vs.* autogenous vaccines), the size of the initial dose, the frequency of dosage, the size of increments, the total number of doses, the time required for improvement, the desirability of local reactions, etc. In spite of this, the results were about the same in most of the papers.

Miscellaneous Comments

Improvement following injections of bacterial antigens is usually slow, three to six months. Occasionally improvement starts promptly.

Over-Dosage with bacterial antigens is more difficult to recognize than with ordinary allergens. Reactions to dust or pollen injections are usually prompt, in minutes or a few hours. Aggravation of asthma from bacterial antigens is frequently delayed 18-24 hours and may last from one to several days. The reaction to one dose may last until the next. It is essential, therefore, that the patient be cautioned to report delayed accentuations of cough or wheezing. These focal reactions are usually, but not always, associated with delayed local reactions which are red and indurated, but need not itch. Mild accentuation of asthma symptoms is not undesirable if it is recognized and the dose is reduced. A 1:10, or 1:100 dilution of the reacting concentration sometimes brings prompt relief. Failure to recognize the delayed aggravation of asthma by the injections may result in intensification rather than the desired relief. If there is any doubt that injections are accentuating cough or wheezing, stop them for two weeks. Then observe the effect of repeating the last dose.

Once started, injections of bacterial antigens should be continued until the patient has been free of symptoms attributable to infection for at least a year. On the other hand, the injections should be stopped if there is no improvement within six months. There is no laboratory or clinical test which will tell us when a patient can stop injections with little chance of recurrence. Experimentally, desensitized animals become resensitized three weeks or less after desensitizing antigen injections are discontinued. Patients do not follow such a regular pattern. Experiments, underway in this laboratory, to test the hypothesis that desensitization with haptens will be more lasting, have been mentioned.

There is a *widespread belief that injections* of allergens or of bacterial antigens *should be interrupted* during intercurrent illnesses such as measles, whooping cough, pneumonia, mononucleosis, etc. *There is no known basis for this belief. No purpose is served* by stopping the injections. On the contrary, many instances of troublesome recurrences of asthma have been seen in patients whose asthma had been well controlled until effective allergen injections were discontinued during and after an intercurrent illness . No harm (or good) is done by reducing the dose and increasing the interval between injections, temporarily, to about two weeks, but *the injections should not be stopped.*

Summary

Infectious asthma is usually associated with other causes of wheezing. These should be looked for and treated. Infectious asthma does not respond as well, ordinarily, to symptomatic remedies as does allergic asthma.

Acute infectious asthma and acute infectious exacerbations of chronic asthma respond to treatment with the same antibacterial remedies which relieve non-asthmatic respiratory infections.

An effective antibacterial remedy should be continued until the acute attack or the exacerbation of a chronic infection is over, five to ten days in most instances. When antibacterial remedies are stopped too soon, some asthma persists and is easily flared-up by non-specific aggravating factors such as temperature changes, fatigue, drafts, etc.

When one antibacterial remedy is not effective, in three or four days, try another. Ideally cultures should be made from nasal and bronchial discharges as soon as the diagnosis of infectious asthma is made. Sensitivity studies will then permit specific antibacterial treatment.

Antibacterial remedies can be applied topically as aerosols.

Thick tenacious sputum is frequently loosened by tryptar aerosol.

Infectious asthma is the usual cause of status asthmaticus, by which we mean asthma which is not relieved by symptomatic remedies.

ACTH, cortisone, and hydrocortisone can be used freely and effectively in infectious asthma if buffered

with appropriate antibacterial remedies.

The paranasal sinuses are infected in a high percentage of cases of infectious asthma. Sinus infection must be recognized and treated promptly when present.

Chronic infectious asthma or infectious asthma which recurs frequently is often benefited by the use of immunizing injections of bacterial antigens. The use of these antigens is empirical but is often effective. This problem is discussed in some detail.

Some Patients Don't Want to Be Reassured.

Sometimes the worst thing a doctor can do is to tell a patient he's perfectly well, a University of Virginia School of Medicine physician, Dr. Andrew D. Hart, has said. Some patients don't really want to be reassured. These are the patients with "cardiac neurosis," which may cause real symptoms of heart disease but may only be a substitute or cover-up for greater problems—such as tension and nervousness or fear of mental illness. This type of patient visits the doctor with complaints of heart symptoms, and is told firmly and reassuringly that he has no heart defect. The patient may then go to another—or more than one—doctor seeking another diagnosis. He may quote the first doctor as having said such things as "You have six months to live" or "I've never seen a worse heart than yours." The patient actually may believe this was what the doctor said—since even normal memory is far from accurate, and nothing is so helpful as recollections to people who "dearly" need to believe something.

Further reassurance does not help. The patient appears to be pleased with good news, but gives himself away with such statements as "It's just got to be physical or it must be mental." He might admit he would be "greatly relieved" if anything tangible could be found, Dr. Hart said in the November 20 Journal of the American Medical Association.

The behavior of such patients suggests that the anxiety about their hearts is necessary to them. A tangible organic defect serves as a "lesser-evil" defense against greater, undisclosed fears.

"Most of these persons have been inwardly tense and high strung as far back as they can remember." "Nearly all admit to excessive nervousness and worry. Sometimes an insidious emotional depression has led to a stifling, 'heavy heart' sensation that is none the less real because it is impossible to describe."

Unrest, undermining of self-confidence, feelings of unreality, and dread of mental disease often result in a person's conviction that he has heart disease, and he becomes preoccupied with this notion. At this stage, a firm statement that there is no heart disease only makes the patient discontented. He doesn't know how to explain his feelings in the face of an excellent physical report.

Rather than an outright statement of good condition in such cases, Dr. Hart suggested that physicians should avoid a firm diagnosis and work for a closer relationship with the patient to find out what his deeper problem is. Some patients then will respond to treatment aimed at turning their energy and talents away from their concern about disease and toward outside interests and activities.

Management of Asthma in Children

SUSAN DEES, M.D.
Durham, North Carolina

VARIOUS aspects of asthma have been considered today with the exception of those which are modified by the special conditions of childhood. At first one might think that these are minor differences, but we soon realize that not only is the patient smaller, he is less cooperative, his fluid and his nutritional requirements are different, and his abnormal and his normal chest examinations are entirely different from those of an adult. His susceptibility to respiratory infections is greater; his drug tolerance and emotional response to illness are not exactly like those of an adult. In addition, we have more than the patient himself to treat. The patient's parents are deeply involved in the management of asthma of the child. The child is brought to the doctor, he does not come to the doctor by himself, and that changes the entire focus of approach to the problem, because the patient is there in an entirely, I started to say passive role, but he is there is a very actively resistant role. The mother complains that the child has so-and-so. If we ask the child: "Why are you here? What's bothering you?" he may look around and say, "I don't know." Sometimes the situation which the parents describe actually does not bother the child at all, but he is bothered by an entirely different group of complaints. All of these things make the management of asthma in children a slightly different problem from the management in an adult.

If we consider first, some of the special features of asthma in infants and children under 2 years of age, we find that making the diagnosis is some times extremely difficult and in many instances we may diagnose asthma only by excluding everything else that might reasonably resemble asthma. Sometimes these other things are eliminated as quickly as they come to mind by the history, the age of the patient, and the physical examination; in other instances, it may be necessary to go through quite a gamut of special diagnostic tests in order to be sure that one is actually dealing with allergic asthma.

Among the conditions which must be differentiated from asthma in young children is, first and foremost, the presence of a foreign body in the respiratory tract. Laryngeal disease, tracheal disease, atelectasis of the right upper or more often right middle lobe of the lung may simulate asthma. Cystic fibrosis of the pancreas is becoming more and more widely recognized, but it may present enough features that have an allergic flavor to be confused with allergy in young children. We have just seen such a patient who had been treated for four years as an allergic child, who does not have an allergy at all, but cystic fibrosis of the pancreas.

There are many children who wheeze because of tuberculous lymph nodes, and who present a picture very much like bronchial asthma. It is probably unnecessary to emphasize to this group, who are familiar with the work of Dr. Edwin Kendig in Richmond, the importance of tuberculin testing in children. We feel that a tuberculin test should invariably be applied to all children who are having respiratory difficulty and who are suspected of having asthma.

If we turn now to the complications of asthma in children, we find as an outstanding problem, their extreme susceptibility to upper and lower respiratory tract infections, and that their pattern of reaction to infection is quite different from that of an adult. In contrast to the fairly easily recognizable focus of chronic infection in an adult, a focus of infection in a child may be so minute that it may smolder along without being recognized between either acute re-infections or exacerbations of infections. It is very difficult to do the sort of study to determine the extent of infection in a child who is acutely ill with respiratory distress that one would do in an adult. Many of the tests and examinations indicated for a thorough scientific medical study have to be omitted or postponed in a child in favor of immediate treatment for infection on the basis of a presumptive working diagnosis.

In addition to foci of infection, and allergy elsewhere in the body, psychological factors in the family situation are of the greatest importance. Since they have been discussed so fully we will not do more than to reiterate that they may profoundly color both the family and child's reaction to the disease.

A series of slides are shown to illustrate some of the complications of asthma, atelectasis of the right

SUSAN DEES, M.D., *Associate Professor of Pediatrics and Allergy and Chief of the Pediatric Allergy Service, Duke University Medical School.*

upper lobe in a 5 year old during asthma, with re-expansion with steam and expectorants.

Chest x-rays of a 3 year old girl with very severe asthma whose plain films of the chest made during attacks showed only suggestive diffuse broncho-pneumonia with a little more infiltration in the right middle lobe, but whose bronchograms revealed congenital bronchiectasis of the right middle lobe.

Subcutaneous emphysema occurs as an infrequent complication of asthma and may cause marked dyspnea due to air in the mediastinum. This situation is illustrated by x-rays in two different children.

After one has tried to eliminate the possible complicating factors, and conditions which may simulate asthma, we are faced with the problem of how to treat an acute attack of asthma. We have outlined medications that are sometimes effective in treating acute asthma in children with the comment that the doses are pediatric doses which may not be the case in some of the regimens which you have. There are certain things which are important in trying to get a child out of an acute attack of asthma. The fluid balance: children get dehydrated very quickly and they often have a good deal of fever, so they need fluids and they often respond dramatically to steam. In our experience, the use of Alevaire is very helpful but it seems to be more efficient if the child is of an age where it can be put into a croup tent. Then one must be sure the croup tent is actually delivering as much oxygen and Alevaire as one would expect. Those are technical points, but they make a lot of difference and must be constantly checked. In older children who don't need oxygen and who don't like to be confined in a tent (and that is an important thing in children) a nebulizer attached to an oxygen tank or air compressor may be useful. Children don't like to have anything put over their mouths and it is often very difficult to get them to cooperate in inhalation therapy. The regimen of an expectorant followed by an inhalation of an antibiotic sounds very nice on paper. The whole procedure may take nearly an hour to complete even though the postural drainage is planned only for about 5 minutes. But in spite of the difficulties, these techniques often can apply to children if parents or attendants are persistent in their efforts to carry them out. Children are more apt to complain of the taste of something, the feeling on the tongue, and so on, and their objections limit the effectiveness of these medications a great deal. Our experience with Tryptar in children has been modified by the objections that Tryptar has been very irritating to the mucosa of the nose and the mouth. I have discussed this problem with Dr. Swineford, and we have started doing the things which he has suggested. We have had two children who have gone into acute bronchospasm after several days of the nasal and throat irritation from inhalation of Tryptar. So, because of the difficulty in getting the child to cooperate, we are limited in using some of the means which I am sure would be very helpful if we could apply them under ideal conditions in children.

It is not necessary for me to discuss the use of the adrenalin and aminophyllin after the previous speakers, except to say that children usually respond very beautifully to these drugs. The mistake which is often made with aminophyllin in a child who is being treated for the first time, is exceeding a dose of 3 mg. per pound of body weight. If this dose is exceeded before one knows how well a child tolerates the drug, the child may be very nauseated and may have a day or two of intractable vomiting as a result of the aminophyllin. This may be a harder thing to treat than the asthmatic attack. If they just vomited once and stopped, that would be just fine, as asthma often improves after vomiting. Some children object to the use of aminophyllin by suppositories. For best results I have found that mothers must be given explicit directions for the technique of inserting a suppository high into the rectum. If a child is constipated there is actually no point in using medication by suppository unless the rectum is emptied of stool. If the child is too ill, or the mother doesn't feel capable of giving a cleansing enema, then liquid instillation with an infant ear bulb syringe will be more effective than a suppository.

The use of ACTH and cortisone in treating allergic children is a matter of much interest at present and we are all familiar with recommended dosage. I think many people don't realize that one can give children doses for full therapeutic effect, and the severity of the condition being treated, not the size of the child, determines the amount of hormone to be ordered. Because many of us aren't used to taking the blood pressures of these little children, we sometimes forget that children develop hypertension from ACTH and cortisone just as do adults. When starting steroids we may think that we are only going to use them for the safe period of maybe one or two weeks, but, oftentimes, as many of you have learned, you start and you can't let go. So it is very important to know what a child's blood pressure is and to follow that carefully while giving the hormones. The weight is a pretty good index of tolerance, al-

though I have seen cases who developed hypertension without having a great gain in weight. It is also important to watch the salt intake in these little children. An infant diet with a quart of milk a day or with a milk substitute, in which there is an even higher salt content, contains more than a gram of salt. There is also added salt in strained or junior baby food.

In planning a low salt or salt free diet for an infant or young child, mothers should be instructed to cook the proper foods at home without added salt. Oftentimes we have to suggest giving potassium chloride in addition, to keep the children's electrolytes in balance. Those aren't problems in children who don't need steroid hormones for long periods of time. As cortisone can be given by mouth, ordinarily it is much easier to use in children than ACTH. It is substitution and not stimulating therapy and must be decreased gradually to prevent adrenal insufficiency. If time allowed I would show you some slides comparing the cost of ACTH and cortisone therapy; intravenous ACTH is the cheapest way of using any of the hormones; I think it is about 20-40 cents a day, compared to considerably more than that for the oral treatment.

Non-specific irritants are very important in producing wheezing in young children, and I think those are very important in little babies. Babies who have ever wheezed for any reason, may wheeze on subsequent occasions when anything irritates their respiratory tract. An example is cough when exposed to cigarette smoke and other sorts of tobacco smoke. Many adults who smoke incessantly are very inconsiderate of the little child who has a respiratory difficulty. Another kind of smoke which is extremely irritating is that from wood, kerosene, fuel oil, or coal combustion. Some heaters which have poor vents and don't burn efficiently, produce fumes which are another non-specific thing that causes wheezing. This has recently been emphasized by E. A. Brown. It is important to have air in a house moist enough because dry air may act as a non-specific irritant. All of these things should be attended to as a routine part of the management of asthma in the very young child.

The antibiotic problem has been discussed very thoroughly just now. I think the mistake that many people make in treating infections in allergic children is to give inadequate dosage. A mother says "I took the baby to a doctor and he gave him a shot of penicillin and he was all right for 3-4 days," and so on. This "one shot" is partly the parents' fault and partly the doctor's fault. I think the doctor should always try to maintain the key position about when he's going to give medication and when he isn't going to give it. I am sure most doctors at present feel that one injection or a few tablets are probably not going to completely eradicate the infecting organism in the respiratory tract, but he may not emphasize this sufficiently to the parents. If we would tell the mother in the beginning, "Now mother, we think this infection may be getting stubborn, and we may need to treat it for more than one injection, and we may also need to change our medication during the course of the thing," then the mother would not go away from the doctor's office with the feeling, "Well, he gave one thing today and another thing when I went back, and I'm not sure that he knows just exactly what he is doing, and I'm going to go on down the street somewhere else." I think that if we let mothers of allergic children who have infections realize that such children need just as vigorous treatment to eradicate infections as an older person does, we may prevent the development of resistant organisms. We see more and more children with Pseudomonas, Proteus and E. coli respiratory infection, and as far as I know we have no entirely effective agent against these bacteria at the present time.

In the older age child, the treatment of acute symptoms is very much like that in young infants, but our second step is of course making an etiological diagnosis. The testing has to be modified just as in little children. Since scratch tests are easier to do than intradermals in most infants and children, besides their being so much safer than the intradermals, they are preferred for initial testing. How to do them? Sometimes one gets a good scratch test by taking the blunt end of an ordinary wooden applicator and turning it around on the skin. This gets away from the sight of the needle, and oftentimes is a very helpful thing in testing a child. The conjunctival test one would think would be a good one, but in my experience most children don't like to have anybody approach their eyes with anything like a dropper. If you can get cooperation I think this is a fine test. Dr. Biedermann in Cincinnati has devised an inhaler for testing; it looks very much like a Benzedrex inhaler, and one can insert into that a filter paper which is soaked with either a liquid allergen or a powdered allergen and the child sniffs it. There is of course a potential danger, that unless it is preceded by a scratch test to rule out the extremely sensitive child, one may encounter severe reactions.

What about the long range program for handling these children? There are just a few things, the afternoon in running along and I would just like to mention a few quickly, particularly breathing exercises. These are based on those devised by the Asthma Research Council—(Physical Exercise for Asthma).

This one is a little modification and the idea is to blow out on expiration and see how far the little light-weight ball can be blown across the flat surface. The description of these exercises can be found in a booklet published by the Chicago Medical Book Co., and costs 80 cents. The exercises are very simple and are the sort of thing that many children enjoy. Postural draining is, I think, another thing that is very helpful, if it can be done properly. A modification for children is to have them get on monkey bars or trapezes and to encourage them to hang by their knees on the trapeze and to do that for a definite time each day or as long a time as they are able. The bar can be hung in a doorway and most children will enjoy that sort of activity.

Another thing which is helpful in the way of exercises are those to increase tolerance to changes in temperature. These exercises were originally described by Duke in which he suggested immersing the hands in warm or cool water for a minute, each day making the temperatures of 1° warmer and 1° colder. Children can by this device develop a tolerance for temperature change, and as one is carrying out a definite program it helps the mother to get away from the idea that she must rush out with hat, coat, and over-shoes every time the child runs outside. Mothers soon learn that children do get sick from their exposure to sudden changes in temperature and that these exercises actually help to develop tolerance to temperature change. I think that they are a good addition to the management of asthma in children.

I can add nothing to what has already been said this morning on the last and a most important phase of asthma, the emotional aspect. In children they occur in a setting or are a reflection of problems that are present in the people who surround them. How rapidly one approaches their resolution depends upon how willing parents are to accept them as important. As I said in the beginning, in Pediatric Allergy one has more than just the child to treat—he has a whole family.

PR Tip of the Month

Accentuating the positive is an approach advocated by churchmen, community leaders, copywriters and insurance companies—to name a few. The medical profession would do well to adopt a positive attitude whenever possible: e.g., by substituting "professional liability" for the negative phrase "malpractice."

Insurance companies do not offer *death* insurance. They emphasize protection by calling it *life* insurance. In viewing the medical profession, nine out of ten patients seem to associate malpractice more closely with wrongdoing or guilt than with *protection for the doctor.* Doctors would find it to their advantage to correct that fallacy by using a positive term themselves.

Aspiration of Secretions in Asthma

GEORGE R. MINOR, M.D.
Charlottesville, Virginia

APART from diagnostic considerations, it has become increasingly obvious that now and then a severely ill asthmatic patient needs endotracheal aspiration. In the early stages of a long-drawn-out attack the bronchial secretions can, with some difficulty, be expelled by the patient. Over the course of several days epinephrine may cease to be of help and increasingly tenacious secretions become impossible to dislodge from the finer bronchi. They constitute multiple small foci of obstruction and are, in essence, foreign bodies. Even segmental or lobar bronchi become completely obstructed or impacted, adding atelectasis, with cyanosis and obstructive infection, to bronchospasm. Long before this time the patient needs help in evacuating his secretions. Auscultation of such a chest, in addition to what might be called the common "tea kettle" noises, will usually disclose rhonchi, suppression of breath sounds locally, or distant pectoriloquy. When it becomes obvious that aspiration is needed, one of two procedures should be chosen:

1. Nasotracheal Aspiration

The apparatus, which should be easily available in every hospital, consists of a suction pump and a number 16 F. plain urethral catheter. The catheter should be new and springy. If the tip is cut off obliquely, it will pick up secretions more readily. The patient sits on the edge of the bed with his head thrust slightly forward, his tongue out and held by his own hand, if possible; the catheter is inserted into the more open naris and passed into the nasopharynx. Once it has negotiated this curve, the configuration of the oropharynx focuses it at the glottis. As the patient takes a deep inspiration the catheter is quickly advanced and usually enters the trachea. If it does not, a slight modification of the position of the head will cause it to pass through the glottis. Phonation is now characteristically hoarse or impossible and a paroxysm of coughing is produced. Suction is not applied until the catheter is actually in the bronchus, since it will produce cyanosis if prolonged for more than four to six seconds. When the head is turned to the left, the advancing catheter enters the right bronchial tree; it is advanced, perhaps to the hilt, and retracted several times, being rotated meanwhile, as suction is applied. Secretions are sometimes so viscid that the catheter becomes clogged and must be removed and rinsed with water. To aspirate the other bronchus, the catheter is retracted to a point estimated to be above the carina, the head turned to the right and the catheter advanced again. It now usually enters the left bronchial tree which is cleansed in the same manner. Obviously there are many secretions far outside the range of this catheter, but the coughing that it produces may dislodge some of these finer obstructions and eventually mucoid tenacious secretions may be brought within range of the catheter tip. The procedure is quick, safe, simple and usually effective.

2. Bronchoscopic Aspiration

This procedure is a little more formidable than simple nasotracheal suction, but does not necessarily require the patient to be taken to the operating room. In an emergency, a bronchoscope, a battery box and a source of suction are all that are required and can be used effectively in the patient's room without moving him from his bed. Anesthesia is not essential.

For best results a safer and more effective procedure can be carried out in the operating room where some sort of anesthesia is available and oxygen and other resuscitative materials are at hand. If topical anesthesia is chosen, such as cocaine or Pontocaine, their intrinsic toxicity should be kept in mind. Moreover, in the asthmatic any material introduced into the pharynx or trachea, or simply the patient's apprehension occasioned by this act, may produce an alarming increase in the respiratory difficulty. One may need to give aminophylline or epinephrine intravenously. Our preference is to use deep ether anesthesia, with care during induction to assure adequate oxygenation by manual assistance. This avoids the possible toxic and bronchospastic effects of Pontocaine to which asthmatic patients seem peculiarly susceptible, and affords whatever beneficial effects ether may have on the bronchial musculature. When the plane of anesthesia is deep, the bronchoscope is introduced with oxygen flowing

GEORGE R. MINOR, M.D., *Associate Professor of Surgery, University of Virginia.*

through the side-arm. A rapid inspection is made and the secretions aspirated and collected for culture and sensitivity studies. Infrequently, some unusual situation such as an unsuspected tumor or bronchial stenosis is found. As the anesthesia begins to lighten and the cough reflex returns, normal saline in 20 c.c. increments may be instilled through the scope and aspirated while the patient is being turned by the assistants into positions calculated to expose the various lobar and segmental bronchi to lavage. Quite frequently an amazing amount of stratified, gelatinous material and fine bronchial casts will be obtained in the collecting tube. Sometimes this sequence will break up an attack completely, due to a combination of factors. Now and then the wheezing may be worse for a few hours, but in general 75% of the patients get moderate to marked relief.

Bronchoscopic findings are sometimes difficult to interpret. One group of endoscopists has reported that nearly 35% of their patients had bronchial stenosis, usually of the superior segmental bronchus of one of the lower lobes. This report, however, is unconfirmed and in our experience bronchial stenosis is uncommon. It should be remembered that the examination is carried out under foreshortened monocular vision, without a standard light intensity, under difficulties imposed by haste and poor exposure; moreover, it is probably not without a certain degree of subjectivity, so that the observations of two careful observers in the same patient within less than a week may be strikingly different. One common finding of interest is spasm of the major bronchial tree below the upper lobe orifices. It is unlikely that this is confined to the lower bronchial tree, but it is seen with difficulty in the upper lobe bronchi, since their orifices cannot be properly inspected directly without a telescope. The same phenomenon can often be found in emphysema and allergic bronchitis.

In summary, our present indications for therapeutic bronchoscopy in asthmatic patients are: The prevention of asphyxia, the termination of a chronic attack, the relief of atelectasis and, finally, on the rare occasions when strictures are found, their dilatation.

AMA Issues New Catalog of Health Booklets

For a healthier 1955, the AMA's Bureau of Health Education presents its new catalog of "Publications About Your Health." Listing hundreds of new pamphlets on personal and family health problems, copies of these booklets may be secured for distribution to your patients through AMA's Order Department.

Several intriguing new titles include—*For Safer Cycling* which describes a community program for teaching children safe bicycling rules; *Is He Ready for Kindergarten?* outlines the points parents should watch for in the physical, mental and emotional development of their pre-school children; *The New Contact and Corneal Lenses* discusses the new type lenses and the types of people who can safely wear them; *Joe's Nervous Breakdown* explains why and how breakdowns occur and what to do about them.

Write today to the Bureau for a copy of the new catalog.

Exhibit on Industrial Solvents.

Uses and abuses of common solvents found in and around the home and factory are pinpointed in a new exhibit—"Industrial Solvents"—prepared by AMA's Bureau of Exhibits in cooperation with the Council on Industrial Health. Particularly stressed are the hazards involved in using carbon tetrachloride and other solvents incorporated in paints, paint and varnish removers, and insecticides. As a precaution, the exhibit suggests adequate ventilation and proper labeling, and lists the various symptoms and accepted treatments. The exhibit—suitable for professional showings—may be secured from the Bureau of Exhibits.

Closing Panel on Asthma

WYNDHAM B. BLANTON, M.D., Presiding
(Drs. Swineford, Dees, Guerrant, Garnett, Fitz-Hugh, and Dr. Fletcher Woodward)

THIS group, seated about this table, is, as you readily recognize, composed of the same experts who have discussed, this morning and this afternoon, various important phases of asthma. They are now ready to receive and answer any and all questions which the audience wishes to put to them. This seems to be a particularly happy way to bring together any loose ends and to conclude this conference.

The first question indicates that someone in the audience feels that we are requiring too much of medical students in asking them to take the elaborate histories necessary in allergy. The questioner seems to doubt whether medical students are capable of handling such an intricate allergy questionnaire as has been distributed among us today, and wonders if the student's time had not better be spent in reading more about allergy in the text-books devoted to that subject. I should like to ask Dr. Swineford to address himself to this question.

DR. SWINEFORD: That brings out my paranoia. As stated in the introduction, asthma and hayfever affected 3,500,000 people in 1938. They were third on the list of recognized chronic diseases and were responsible for the loss of 21,900,000 working days that year. Asthma was diagnosed more often than any other important disease in this institution in a recent 5-year period.

I never have, and never will understand the complacency with which curriculum committees make it impossible for medical students to learn to take care of such a common group of diseases with the same assurance with which they take care of heart disease, diabetes, thyrotoxicosis, peptic ulcer, etc. The average medical student is taught more about Addison's disease, which he will see once or twice in a life-time, than he is about asthma which he will see every week or so. If anybody can tell me why a student shouldn't be taught how to deal effectively with these common complaints, I'd like to hear it. I have been waiting for even a poor explanation of this for over 20 years. By a strange coincidence one of our recent graduates was in the office complaining of just this problem the day this was typed.

DR. BLANTON: Another question, Dr. Swineford. What is your belief regarding the so-called allergic balance?

DR. SWINEFORD: I don't believe that I can answer that to everybody's satisfaction. Clinically, it seems that a combination of etiological factors is often necessary to change the allergic state of the individual from a subclinical to a clinical degree. For example, we see many people who on auscultation will have mild degrees of wheezing. They are perfectly comfortable, they don't know they are wheezing—they are in what we consider a subclinical state. They can be thrown into a paroxysm of asthma by non-immunological or by immunological means such as: changes in the weather; emotional tension; the inhalation of non-specific irritants such as fresh paint or cigar smoke or the fumes of moth crystals; the ingestion of a food or the inhalation of an allergen to which they are sensitive.

Dr. Eyermann, of St. Louis, found that a group of seasonal pollen cases were also clinically sensitive to some foods. When the next pollen season came around he put them on a diet from which these foods were eliminated and found that the majority of them no longer required pollen treatment. From that he developed the idea of the so-called *total allergic load* as an explanation for the change from the subclinical to the clinical state. Dr. Warren Vaughan called attention to what he called the *balanced allergic state* in which other things than the immunological mechanism determined the incidence and the severity of allergic symptoms.

DR. BLANTON: What is your attitude toward the role of heredity in asthma?

DR. SWINEFORD: That is a controversial subject. Until recently the idea seemed to be pretty well accepted that the tendency to become sensitive is inherited as a dominant characteristic. Dr. Dees, what do you think about this? I am sure you have given this a lot more thought than we have, because you get them while they're young.

DR. BLANTON: Will you enlarge on this question, Dr. Dees?

DR. DEES: I think it is very difficult to be sure from the literature what most people mean by a family history of allergy. It is impossible to make comparisons with one's own and reported cases

because relationships are not clearly stated in the literature. It seems to me from our histories that the percentage of close family history is rather small. If one includes distant relatives, perhaps in as loose a fashion as could be reported by the family, so that one would include grandparents, aunts, uncles, and cousins, then I believe one would find about 55% of the patients have allergic relatives. If one considers only parents, then I believe it is much less than that. The incidence of sibling allergy among my own patients has been relatively small, but Dr. Glasser and others have reported fairly high incidence of sibling inheritance of allergy. I think the question is still one that needs to be reviewed and reconsidered. Whether Dr. Ratner's idea that the inheritance of allergy is rather limited turns out to be true or not, I think it would be worthwhile to have more precise information on this point.

Dr. Blanton: What is the type of inheritance in allergy? Is allergy a dominant or recessive character?

Dr. Dees: If there are few siblings, then that might explain why we see a rather small number of fathers and mothers who are allergic who have allergic children, but, if we go back to the grandparents, we deal with a much larger group, with much higher incidence which fits in more with the Mendelian theory of inheritance. The exact method of inheritance of allergy is not known. It has been stated that allergy is inherited as a Mendelian dominant with poor penetration. I am certainly amazed in looking over the records to see that the knowledge of family diseases is so different in different families. Some folks can tell you the most minute details about what was inherited and what other members of the family had, and others don't know anything about their family backgrounds. This makes data on inheritance based on patient's statements very inaccurate. I think until we can get these records of family diseases from doctor's own records rather than from parent's stories that we won't know what's what.

Dr. Blanton: Do you know of any statistics where the numbers of allergic children from nonallergic families have been compared with those from allergic families?

Dr. Dees: Yes. Those are the sorts of figures that Dr. Ratner has presented in his study. But, again, let me point out that if one tries to take hospital records of 100 children, with, for example, broken legs, to see how much asthma or allergy is reported in their family background as it is recorded, the chances are that there would be practically none because the presenting problem is not allergy.

Yet, later, many of those children may turn up in an allergy office, at which time the emphasis is on whether there is allergy, and then somebody will inquire for such a record and an allergic family history. I think that much of this information is biased because of the bias of the parents who are telling the story and because of the ears of the person who listens to it.

Dr. Blanton: I have several more questions which should be directed to the pediatrician on the panel. The first question is: Do children outgrow asthma?

Dr. Dees: I am sure some children do outgrow asthma. I don't think anyone has any accurate figures as to how many actually do outgrow these troubles. Swedish authors, who don't have the problem of ragweed pollen sensitivity, have stated that some 50% of the children outgrow asthma. In this country, as far as I know, no one has ever followed a series of untreated children who had allergic manifestations in early childhood to their later childhood to find out exactly how many of them outgrow the disease, but I think the impression one gets from pediatricians depends entirely upon how allergically oriented the pediatrician is. There are two physicians on our staff, for example, who have offices side by side and practices made up of the same general type of patients and living in the same locality. One man says that the incidence of allergy in his pediatric practice is not more than 3%. The other man says that at least 40% of his practice has allergic manifestations at one time or the other. Now, I am sure that those figures are biased by the man's own viewpoint. We need some thorough study of the allergic child's natural history. I think it would be safe to say that some children do outgrow their allergy because they become less sensitive to things. Other children outgrow it simply because by natural causes they are able to avoid the things they are sensitive to, and I think we just have to leave the figures unanswered and say that some do.

Dr. Blanton: Does anyone else have a comment on that?

Dr. Garnett: I would just say that from a psychiatric standpoint we do see those that do outgrow it and we think that part of how that occurs is simply in the maturing process and also upon the fact that the child, as he grows up, frees himself from his

traumatic home situation, if he is sensitive to the same sort of things to which you are referring.

Dr. Blanton: There is a saying among allergists that infantile eczema eventuates in hay fever and later in life in asthma. Now, can you take the infant with eczema and prevent him from having asthma?

Dr. Dee: I don't believe that we can at the present time. That's what we hope to do, but the only study that I know of in which children with eczema were followed into older childhood didn't show figures that had reduced the incidence of the expected asthma in those children, and the incidence of expected asthma in children who have severe eczema is about 50%. The asthma may not be severe, but about half the children at least will have asthma. We hope that we'll modify it by treating the eczema.

Dr. Blanton: Some allergists favor, instead of direct skin tests on children, passive transfer. What is your attitude towards this matter?

Dr. Dees: I think that passive transfer tests, just like direct skin tests, are a useful tool. I think they are even harder to interpret than direct tests and I think that the direct testing is the preferable method, as a general technique. I think passive transfer tests are very helpful under certain circumstances when the child's skin, for example, is too broken out to test directly; when he is too ill to be tested directly; occasionally for convenience, although that ordinarily isn't an important thing. But I think that it should be used as an adjunct to the other types of tests rather than the one on which one relies exclusively. Many people would disagree with these ideas, but that is my feeling about it.

Dr. Blanton: One final question you can answer yes or no; in hyposensitizing children, do you regard the weight and height of the child?

Dr. Dees: No.

Dr. Blanton: Why not?

Dr. Dees: Just as with the use of cortisone and ACTH we don't determine the dose by the size of the child but rather by the severity of the condition we are treating, so it seems with the desensitization technique that one should be guided by the degree of sensitivity the child has rather than his age. Little children can tolerate, often need, and are benefited by, exactly the same size doses that adults have.

Dr. Blanton: Have you actually used the smaller doses?

Dr. Dees: I think everyone who has treated children goes through a period of doing that initially because he thinks, well this is a tiny baby, I just don't dare give him what I would give an adult. And then he finally learns from experience that they can take as large doses as adults and sometimes even larger doses than some older children and adults.

Dr. Blanton: Here is a question about something that has been much in the public thought of late—tobacco. How does the panel feel about tobacco? Do you, Dr. Dees, have any ideas on tobacco?

Dr. Dees: I think that tobacco smoke is a nonspecific irritant for a great many people and a great many children. I think that as far as children are concerned—and they get smoke second-hand—the use of a filter doesn't make any difference. It has been my experience that there are very few children who are actually allergically sensitive to tobacco, and only a very few patients report they are unable to work in tobacco because of its producing respiratory symptoms.

Dr. Blanton: Suppose now we go to the psychogenic factor in asthma, and we will ask Dr. Garnett, can you apply to children the same methods that you apply to adults?

Dr. Garnett: We use the same methods with the exception of the factor that Dr. Dees mentioned that you have to deal more with the parents, more with the situations, more with the manipulation of the environment of trying to relieve or protect the child from certain factors in his situation and less with the actual unconscious and intrapersonal factors that the adult has incorporated into his own personality. I do think that a fair percentage of asthma in children is psychogenic and has to be treated psychotherapeutically if you are going to get a good result. The approach is somewhat different for the same reasons and in the same way that the medical approach to the child is different.

Dr Blanton: In your field, do you ever use shock therapy or psychoanalysis for asthmatics?

Dr. Garnett: Shock therapy as a symptomatic treatment is sometimes used and sometimes has a dramatic and perhaps even life-saving result. The close relationship between asthma in some people and a severe psychotic state such as the severe depression or paronoid state is quite remarkable and both of them seem to respond to shock treatment as far as the acute symptoms are concerned. I do not think that that is the definitive treatment; it does not actually change anything. As far as psychoanalysis is concerned, of course that may be the definitive treatment. It is applicable, however, in

a relatively small number of people for various reasons. What we do use or advocate in most cases is a modified form of psychoanalysis or psychotherapy directed at the specific psychological factors in the personality and in the situation.

DR. BLANTON: One other question, Dr. Garnett. Do you believe this abnormal dependence on the mother is the result of some faulty relationship between the mother and child, or is the manifestation a personality defect on the part of the subject?

DR. GARNETT: That is a very interesting question which we cannot answer with any great degree of certainty. I would say probably both. There probably are children born with a certain constitutional tendency to be more passive, more dependent as we call it, more oral in their fixation, and there are others who are born with more aggressiveness, more tendency to develop along independent lines more readily. However, the environmental factors, particularly the early relationships between the mother and the child, do have a very large determining factor on what happens to the child, granted his hereditary predisposition. I would say in answer to that that both play a part.

DR. SWINEFORD: Can you give us any idea as to why maternal rejection causes unequivocally bad asthma in some youngsters and in grown-ups, but not in the majority who have the same emotional background?

DR. GARNETT: I perhaps unconsciously wishfully avoided the whole problem of so-called selectivity of psychosomatic symptoms, as to why one person might develop asthma, another nothing at all, and another eczema or stomach symptoms. This of course is an extremely controversial problem still. There are many ideas, none of which can fully explain the situation. The oldest theory was perhaps the so-called "weakest link" theory, that is that the system or organ which was most vulnerable was the system through which these emotional factors might be expressed. A reversal of that has been elaborated very recently by Wolf of New York who feels that it isn't the weakest link but the strongest link—in other words, the organ or system which has the most significance to the person is the one that he may utilize in this defensive way against his emotional conflicts. Then there is the factor of pre-existing disease, of a child, for instance, who has had chronic croup or frequently recurring croup as a very young child, then anxiety may become associated with the breathing function and it becomes a mechanism by which he gains the concern and attention of his mother. This undoubtedly plays some part. I would say that the factor of suggestion seems to play some role—the fairly frequent occurrence in a history of a child or an adult for that matter, having observed or been exposed to someone else in his environment who had asthma or hysterical dyspnea or pneumonia or something of that sort that made a striking impression on them and suggested the use of the respiratory mechanism as a means of expressing or discharging emotions. Finally there is the symbolic significance of the breathing, the exaggeration, as I have said, of a normal physiological tendency in all of us when under certain strong emotions to do such things as catching the breath or holding the breath or to pant or breathe heavily. The psychosomatic aspect, as I indicated at the beginning of my paper, is often thought of as an exaggeration or an intensification of a normal physiological response. Perhaps to try to answer very specifically as to why some do and some don't I would say that it is often a combination of these various factors plus possible unknown constitutional factors that we have to hypothecate.

DR. BLANTON: Dr. Swineford, would you comment on group testing, using groups of extracts, versus the use of the individual allergens?

DR. SWINEFORD: Our routine here is to group extracts of botanically related foods and test with a mixture of these foods as recommended by Dr. Warren Vaughan a number of years ago. That is an expedient, whether it is adopted or not is a matter of choice of the person who is to do the skin tests. Although many fruits and vegetables are botanically related, the evidence that they are antigenically related has not been explored satisfactorily. It is simply one of the short-cuts employed to cut down on the total number of tests necessary to provide a fairly comprehensive test coverage.

DR. BLANTON: Dr. Swineford, one more question, how can you get a patient off of cortisone once you've got him on it?

DR. SWINEFORD: I've got one arthritic I would certainly like to get off it. I don't know any way except just to take him off gradually and see what happens. During the period of removal, of course, there are the dangers of hypoadrenalism. The period when people are on cortisone should be utilized to the fullest to attempt to lessen their need for it. Too often there seems no satisfactory alternative to maintenance on the smallest effective dose.

DR. BLANTON: Dr. Dees, some pediatricians recommend the routine use of antibiotics and sulfona-

mides in the treatment of premature infants. Will this practice sensitize children to these substances?

Dr. Dees: I think that is a very good possibility, but I think that if the need for them is there and it very often is in premature infants, one has to take that chance.

Dr. Blanton: Dr. Woodward, do you advocate the routine removal of tonsils in all cases of infectious asthma?

Dr. Woodward: By no means. I think seldom is tonsillectomy indicated, but if you think that infection of the tonsils, as such, should be corrected, to control asthma, it would assist a great deal in the control of the disease if you eradicate the infection in the tonsils. Incidentally, if the tonsils and adenoids are factors in the continuation of the progress of the disease, they should definitely be removed, but not as routine.

Dr. Blanton: Has it been your observation that the staphylococcus is often found in causative relation to asthma? What are its effects on the tissues of the human body?

Dr. Guerrant: The staphylococcus in my experience has usually been an organism that we could get rid of or the patient would die, and lung infection with it has not been important in chronic infections in my experience. I have read that the staphylococcus toxin does have a peculiarly damaging effect on tissues including lung tissues, but I have no personal observation on that.

Dr. Blanton: Dr. Guerrant recognizes the importance of mild or subclinical asthma in the eventual production of emphysema. Should we not therefore, be more vigorous in our treatment of this state earlier in the development of the disease?

Dr. Guerrant: I don't know. I don't know why people get emphysema. We see some people that have asthma, quite severe asthma, for years and years and they don't get disabling emphysema. We see other people who never have any appreciable asthma who get severe emphysema. So I couldn't answer that with any assurance that I was answering it correctly. I would say that asthma seems to be one of the things that causes emphysema and, therefore, we should treat and control all asthma that we possibly can whether it is minor or severe.

Dr. Blanton: I'll ask Dr. Guerrant if he thinks ammonium chloride should be contraindicated in emphysema.

Dr. Guerrant: If one happens to have respiratory acidosis secondary to emphysema, which is one of the fairly common complications, ammonium chloride is likely to make that person worse, not always. As an expectorant for the treatment of emphysema, I don't believe ammonium chloride is very effective. In treating a person with emphysema who has heart failure and in whom you want to use a diuretic, and you need ammonium chloride to help you, I would see no objection so long as the patient did not have important respiratory acidosis.

Dr. Blanton: Here is the final question: "Please comment on some of the possible difficulties of the use of oxygen in the therapy of asthma." It seems to me that I might answer that by saying that oxygen lack is not a frequent need in the asthmatic. Oxygen is a drying substance. In asthma with emphysema, oxygen may actually produce alarming symptoms—the cessation of breathing and death in coma. The respiratory center becomes very insensitive in asthma, and the employment of oxygen may be disastrous. Any further comments on oxygen in the treatment of asthma?

Dr. Guerrant: It looks as if Dr. Blanton has covered it. Oxygen is seldom necessary in asthma, and in asthma complicated by emphysema it is dangerous. There are times when one has to use it.

Dr. Swineford: Oxygen doesn't do asthma any good. It is a ritual which you can duplicate simply by putting the patient in a tent and running in some cool moist air or steam or anything else you want to use. Oxygen is expensive and, more important, it takes the doctor's attention away from the patient's need for more definitive treatment.

Dr. Blanton: And yet I think it might be said that there are very few people in this audience who don't use it. It is very commonly used.

Notes On Pulmonary Tuberculosis . . . .

Modern Therapy VII
The Need for Balance and Perspective

The discovery of anti-tuberculosis drugs and the perfecting of daringly ingenious surgical techniques applicable to pulmonary tuberculosis, have, within the past few years, virtually revolutionized attitudes and practices with respect to this disease. But the many instances of truly miraculous performance by modern therapy must not be allowed to completely obscure the continuing validity and worth of fundamental precepts.

While the full impact of specific medicinal therapy and modern surgery upon tuberculosis is yet to be evaluated, there is nothing to date to indicate that either of these extremely useful treatment aids can completely replace familiar time-tested measures for the vast majority of patients . Indeed new discoveries and therapeutic procedures should serve to accelerate existing programs, for only by these means can potentialities of each new weapon be fully exploited.

Surgery has obvious limitations.

Nor has it *yet* been proven that any new drug or combination of drugs is uniformly and *completely* curative, *even for the earliest of minimal lesions,* or for healing the residual active foci which almost without exception remain, following *any* type of surgical extirpation. Available drugs are bacterio*static* rather than bacteriocidal in character—their total number is few—the dosage range of each is narrow—and they do *not* always perform "miracles".

A patient's ability to heal pulmonary tuberculosis is still dependent primarily upon his inborn constitutional resistance to tuberculous infection or his innate capacity to develop an "acquired" resistance after birth, which, for practical purposes, amounts to the same thing.

In order that this native resistance may be fortified and encouraged to expand fully, at least to the degree required to meet prevailing needs of the patient, it has been almost invariably necessary for those with clinical disease, to curtail wasteful dissipation of energy. In other words, the patient has found it necessary to *conserve energy*—one of the fundamental laws of Nature for combating infection in the absence of bacteriocidal or other *completely* curative therapeutic agents or procedures.

To reduce energy consumption one must REST—horizontally, vertically, or slant-wise, depending upon degree of conservation required. Reference has been made (see Sept issue, Virginia Medical Monthly) to the fact that "anything that is not exercise is rest". As a corollary one might add that anything *short* of maximal possible energy out-put for a given individual, over a 24 hour period, represents just so much conservation of energy during that length of time. A man standing idly on a street corner clearly is conserving energy by comparison to the effort he would be called upon to exert should he find occasion to mount and vigorously pedal a bicycle—and so on through innumerable gradations —until a conservation regime has been reached which can be achieved only by completely flat round-the-clock bed-rest.

It is well known that innate capacity to resist tuberculosis varies widely in different individuals. Unfortunately, in the past, an exceptionally good natural resistance has not invariably been associated with proportionately greater speed and thoroughness of recovery—*quite the contrary!* For one thing, those with an *above average* resistance were frequently tardy in consulting a physician—they didn't get *sick* enough *soon* enough!

In other ways, an unusually good inherited resistance to tuberculosis can be as a "double-edged sword". When properly exploited (everything else being equal) it *can* cut over-all time required for treatment and spare the patient many sacrifices and much needless physical suffering. But when used carelessly it has been known, with its other "edge", to nullify almost completely the *best* of "good intentions". When and *because* the disease could be so easily "controlled", it was just that much harder for the relatively untutored patient of yesteryear to accept the rigors of serious and consistent *curative* therapy—with the result that treatment in "quantity sufficient for the purpose" was often interrupted or postponed, again and again. Ten or twenty years later the patient with exceptionally good natural resistance still had active disease, often farther advanced with persistently positive sputum, while his tuberculous friend, with *half* the resistance, who needed *twice* as much rest, *and took it,* was well.

Modern drug therapy and surgery add tremendously to the average potentially curable patient's chances of getting well, and the latter requires much less rest than did his counterpart of a decade ago —but unless he capitalizes upon his good fortune,

Prepared by the Virginia State Health Department.

instead of making it an excuse to "play" at taking the cure (in terms of systemic rest) he is apt—five or ten years from now—to find himself in the identical predicament faced by the patient just described. And most of his Tubercle Bacilli, by that time, may be drug resistant, for whatever that may bode for him and for his contacts.

He, in turn, may have a tuberculous friend who, because of *below* average resistance to tuberculosis, combined with a dangerous allergy to the major drugs, (prohibiting their administration) may require four or five or more times as much rest to heal an approximately equilavent amount of disease; *but if the latter takes* the additional required amount—*chances are* that within three to five years *he will be well—and—he will stay well!* Many, many patients with none too good resistance *have done this* in the past, before the days of modern therapy.

Sight must not be lost of the fact that while there has been a marked reduction in the average *amount* of total systemic rest required in treatment of pulmonary tuberculosis, when supplemented by modern treatment aids, there has been and will be *no decline whatever* in the *crucial* importance of such systemic rest as may be prescribed in lesser amount, *as long as adjuvants remain adjuvants!* This applies to hours per day as well as to over-all treatment span as measured in months or years.

True, modern surgery and/or drug therapy *do* save time; they can save a *great deal* of time; the *danger* lies in the patient's thinking that one or both will save even more time than they do.

One of the biggest problems in tuberculosis treatment has always been to persuade the patient to take enough systemic rest, or when indicated, to accept appropriate aids, at the *right time!* Almost without exception, patients can be persuaded to do the right things, *too late!* A person can readily be induced to take fifteen hours bed-rest (or the equivalent) when he needs eighteen; when eighteen is no longer enough, he can be coaxed to take twenty—but by then his requirements may be twenty-four; even the *least* tractable will, at long last, readily accept twenty-four hours a day flat in bed when this amount may no longer be sufficient.

The only difference between taking 60% of the amount of systemic rest required, as compared to 95%, in a given case, is that in the latter instance the patient *gets worse more slowly*—much like jumping from the fire into a frying pan!

Sub-clinically active tuberculosis must be recognized for the important entity that it is, and treatment must be prescribed *specifically* for the purpose of rendering sub-clinically active tuberculosis inactive, over and above what may have been required to eliminate all evidence of *clinically* demonstrable *active* disease. (See Sept. issue, Virginia Medical Monthly) In the past many needless so-called "relapses" have been caused by failure to bear this in mind.

Orientation of patients, their families and friends, is absolutely essential in any chronic disease where effective treatment is dependent, as is often true in tuberculosis, upon group cooperation from start to finish. To promptly achieve and lastingly maintain perspective and balance in any treatment program, *all* members of the team must be thoroughly orientated upon basic facts about tuberculosis, *as a disease,* and its *principles* of treatment.

* * * * * *

Does prolonged systemic rest, especially "bed-rest", inherently produce harmful circulatory, skeletal, and metabolic changes? Apparently not. One might cite, for example, millions of patient-hours spent in hundreds of sanatoria by thousands upon thousands of patients, including scores upon scores whose physical immobilization was virtually complete for long periods, who seem to have demonstrated clearly that such unavoidable (and sometimes extensive) physiological adjustments as must take place under these circumstances, usually are not serious enough to jeopardize success of treatment nor, with extremely rare exceptions, do they prove to be irreversible when clinical improvements make possible progressive liberalizations of program.

On the other hand one *can* state *without equivocation* that systemic rest can be *dangerous* therapy when taken *haphazardly!* When taken for long periods in amounts less than "quantity sufficient" for the purpose, systemic rest *can* be *lethal,* with or without surgery, in or outside a sanatorium.

* * * * * *

For a long time to come many, many newly diagnosed patients will require prompt sanatorium admission, as they have in the past. *For this there can be no substitute,* if they are to be offered the greatest possible assurance of complete and permanent cure. Unfortunately many, many essentially bed-fast patents are being cared for today *at home, who should be in sanatoria,* if they would benefit fully from all applicable forms of modern treatment at a time when anything short of access to total therapy (*including periodic surgical appraisal*) deliberately courts ultimate therapeutic disaster. Ap-

parently there are many who are not yet fully cognizant of what modern excisional surgery has to offer, particularly for other than far- or moderately-advanced pulmonary tuberculosis—results undreamed of even a few years ago—potentialities which no bed-fast patient can afford to ignore—by staying home.

Undoubtedly there are some patients who could be helped greatly by anti-tuberculosis drugs who are not receiving these medicinal agents. During the calendar year of 1953 approximately 244 persons succumbed to tuberculosis in Virginia, who, prior to death, had not been reported to the Health Department. How many of these were diagnosed and for how long before death, is not known; *more* important, however, is that *more* such cases *be* diagnosed, reported, and treated!

Needless to say, of virtually all of the above, who *could* have been identified prior to death, *most* should have been hospitalized at some time—*most* should have received drugs. Had *all* been diagnosed and received appropriate treatment—their birthright in this enlightened age—*many* would not have died! Approximately 252 cases died from tuberculosis during 1953 in Virginia *who had* previously been reported to Health Departments. How many of these deaths were due to belated, half-hearted or misdirected efforts to get well?

* * * * * *

During the next decade or more the fate of tuberculosis eradication programs throughout the country, will hinge upon the wisdom and skill with which physicians diagnose, prescribe, *and persuade their patients to accept* well balanced treatment regimes, tailored to meet the needs of each individual patient and geared to see the vast majority through to *complete* and *permanent* cure.

Sanatorium building programs likewise hang in the balance. Will hundreds of *new* beds (not now available) be needed *tomorrow* for curable patients who are being *almost* cured *today*? Will patients who can be cured without sanatorium care, *be* cured? Will patients discharged from sanatoria *complete* their cure *as most of them should* upon return to places of residence? These are not rhetorical questions but rather of deep concern to everyone interested in helping to eradicate tuberculosis as a major health problem within the foreseeable future.

It goes without saying that enough sanatorium beds *must* be made available to provide institutional care for *all* of those in need.

While it would plainly be poor economy to construct, *in addition,* expensive new sanatorium beds or to hospitalize in existing institutions *selected* patients who *could* be treated successfully upon a non-sanatorium basis, it would be even more wasteful to treat, or to attempt to complete the treatment of these patients, outside a sanatorium unless reasonable assurance can be had that *local physician interest* and facilities will be such as to virtually guarantee *comparable end results!*

Tuberculin Test.

Up to the present time the tuberculin test has been used most extensively in children. Great emphasis has been placed on its value in detecting evidence of tuberculosis in the younger age groups. However, with the marked decrease in the prevalence of tuberculosis infection observed in recent years among our adult population, the test becomes one of our most valuable weapons for the detection and ultimate control of tuberculosis. H. D. Lees, M.D., J. School Health, Sept., 1954.

Prolongation of Endurance.

That data which witness modern medicine's triumphs, the statistics that reflect the declining death rates and the increase in life expectancy (at birth), when critically examined add up to the summation that modern medicine has in a large measure converted mortality into morbidity. Those whose lives it has helped to save in many instances face not an extension of existence in well-being and in health, but merely a prolongation of endurance. Those who by the skills of modern medical science have been saved from death all too often have been saved only to longer endure the burdens of a variety of illnesses, and to die at a later age. In the statistical tabulations such individuals appear to have gained years of welcome life, but these may be, and too often prove to be, years of painful travail, years of dependency, unproductive years which in the last analysis are social and individual liabilities rather than assets. Iago Galdston, M.D., "The Meaning of Social Medicine," Harvard University Press, 1954.

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

Christmas at Our Hospitals and Training Schools

At this season of the year all over the Christian world individuals and organizations endeavor to see that no one is forgotten. Those, who through economic conditions, are unable to provide toys for their children and the traditional Christmas dinner, are provided for by many interested individuals, groups and organizations with the sincere hope that no one is forgotten.

Those of us who are responsible for the care of the patients in our mental hospitals and training schools see that no one is forgotten. Individual gifts, special entertainment and the traditional Christmas dinner are enjoyed by all.

Many months in advance plans are made for the holiday season. With money obtained from profits of the Canteens, money provided from Trust Funds and other sources, gifts are purchased and wrapped in gay and attractive packages for all patients, so that no one will be missed. There are many patients who have no relatives of friends to remember them but they have the pleasure of opening their gifts along with those who do receive gifts from others.

The activity in the hospital mail rooms reminds one of the activities in a post office with the stacks of packages to be sorted and distributed to the thousands of patients. Extra workers and often volunteers help with this work.

Wards are decorated and Christmas trees are placed at various places over the hospitals and Santa Claus makes his visit on Christmas morning to all sections of the hospitals.

For the past several years each hospital has sent to the patients, members of their families and the employees a Christmas greeting card which carries a message from the Governor of Virginia, the Commissioner of Mental Hygiene and Hospitals, and the Superintendent of the hospital or training school. This card lists the program for the season and the Christmas dinner menu.

It is a heart warming feeling to read the program planned and carried out by the various hospitals for the pleasure of the patients and employees. With the thought that these programs might be of interest to you, the reader, some of the highlights for each hospital were as follows:

Eastern State Hospital, Williamsburg—

The season's celebration started on December 10th and extended until January 5th. Special music programs during this period were provided by the Mathew Whaley Chorus and Band, the chorus and choir of the College of William and Mary, Fred Epps and his quartette, the Girl Scouts and the Brownie Troops and other groups. Volunteer groups from the community had teas for women's groups and coffee parties for men's groups. Bingo parties were held for mixed groups and a pageant "The Nativity" was given by the patients.

On the 22nd a Christmas dance was enjoyed by the patients with special music provided. For those who did not dance, movies were provided. A Christmas party for the staff also was enjoyed by the employees on this day.

Christmas day was started off by the delivery of the gifts to all patients, followed by Christmas communion service. At noon a delicious dinner of roast turkey, cranberry sauce, candied sweet potatoes, fresh green peas, relishes and hot rolls, topped off with ice cream and specially decorated cakes was served. The festivities continued during the week with ward parties.

Western State Hospital, Staunton—

The festivities began here on the 18th with the lighting of figures on the lawn and the singing of carols. On Monday and Tuesday a Christmas pageant was given in the auditorium—repeated several times so that all patients could be accommodated in the auditorium. On the 22nd special Catholic services were held in the Chapel. All during the day special Christmas parties were enjoyed in the auditorium, ending the day with carols on the lawn. On Thursday parties still continued in the auditorium at the new unit (located outside of Staunton) ending the day with carols.

On Christmas day the gifts were distributed by Santa Claus and a dinner of roast turkey, cranberry salad, buttered broccoli, relishes, hot rolls and poin-

Article prepared by EDNA M. LANTZ, *Statistician, Department of Mental Hygiene and Hospitals.*

settia ice cream with petit fours made a happy day for the patients.

On Sunday the usual religious services were conducted. On Monday a special communion service for Episcopal patients was conducted. The judging of decorations on the wards and a Christmas dance completed the days activities. The employees were entertained at a buffet luncheon on the 28th. Movies and dances for the patients were continued, with the special programs ending on December 31st.

Central State Hospital, Petersburg—

The celebration of the Christmas season started here on December 23rd and continued through New Years Day.

On December 23rd patients and employees working together decorated the wards and Christmas trees. Movies were the order of the day for the 24th. Christmas day was welcomed by the singing of carols on the grounds and on the wards. A pageant, "The Nativity", was presented by the patients in the auditorium. This was followed by the distribution of gifts. A special Christmas religious service was held in the Chapel.

The traditional roast turkey, along with cranberry sauce, green peas, potato salad, relishes, hot rolls and mince pie was served to the delight of all patients.

For Sunday, Monday and Tuesday religious services and movies provided most of the entertainment.

On December 29th a Christmas play and a minstrel show on the 30th added much to the holiday entertainment.

The employees were entertained at a dance on Friday. The festivities closed with a New Years service on January 1st in the Chapel.

Southwestern State Hospital, Marion—

This hospital opened the season's programs with a bingo party on December 17th. Seasonal services were held on Sunday. Monday, Tuesday and Wednesday activities consisted of decorating buildings and grounds, with movies and caroling as added interests.

On the ward the patients held their Christmas dance, which was followed by the employees' dance.

On Friday, special Christmas parties were the order of the day.

On Christmas day the gifts were distributed and the judging of the decorations of the wards was made. Their dinner consisted of roast turkey, cranberry sauce, buttered peas, candied sweet potatoes, relishes, hot rolls, ice cream and fruit cake.

On Sunday the Christmas religious service took place. Parties were held on Monday. The season's festivities closed with a New Years dance on Tuesday, December 28th.

Lynchburg Training School and Hospital, Colony—

The festivities for the holiday season started on December 1st with a dance. On December 8th a second dance was enjoyed.

On Wednesday, December 15th, a Christmas program was carried out in the school. A religious pageant appropriate for the Christmas season was given on Sunday the 19th and a Christmas dance on December 21st. Thursday a caroler's party was enjoyed. During the entire period until Christmas day, movies highlighted the program.

On Christmas day a party was held on each ward and Santa Claus distributed the gifts. Christmas dinner here consisted of roast turkey, cranberry sauce, mashed sweet potatoes, green peas, relishes, hot rolls, ice cream and fruit cake.

The holiday season closed with a New Years dance on December 28th.

Petersburg Training School and Hospital, Petersburg—

The Christmas celebration opened with a Christmas pageant and a dance on December 23rd. On Friday, games, lighting of the Christmas trees and carol singing made an enjoyable day for the children.

On Christmas day gifts were distributed by Santa Claus followed by a dinner of roast turkey, cranberry sauce, kale salad, baked sweet potatoes, relishes, hot rolls and fruit cake.

The festivities continued through New Years with bingo parties, dances, talent shows, competition games, climaxed by ward parties and a dance on New Years day.

The planning and carrying out of these Holiday festivities for approximately 13,500 patients was work in addition to the regular hospital routine. Many employees spent extra hours in making the season happy and enjoyable for these patients. Their compensation was giving pleasure to these people who were unable to enjoy the holiday season in their homes and communities. It was "a job well done".

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

The State Health Department's Meat Inspection Service

During the last session of the General Assembly an enabling act was passed authorizing the State Health Department to set up a meat inspection service. This service is to be voluntary on the part of the packers and must be self-supporting. The service is to operate under regulations adopted by the State Board of Health which are not less than those under which the Federal Meat Inspection Service operates.

Many meat packers and processers in the State have indicated an interest and several are already under the State Service's supervision with more to follow as the program grows. This interest can be attributed to a desire on the part of the packer to assure his customer of a clean, wholesome product and to afford him access to large urban markets that require all meats to be inspected before sale.

It is well known that numerous infectious diseases of animals are contagious to humans. It can be readily seen that intimate contact with diseased animals or their flesh increases the possibilities of transmission taking place. Admittedly, thorough cooking eliminates this hazard to a great extent but many cuts are consumed in a rare state and are therefore not protected. Handling of raw meats may also play a part in spreading certain infections, notably brucellosis, as is indicated in studies among packing plant employees.

At about the turn of the century Sinclair Lewis's book "The Jungle," and its description of conditions in the packing plants around Chicago, prompted the public to demand of Congress a regulatory service covering meats moving in interstate commerce. Out of this has arisen the modern inspection service under the U.S. Department of Agriculture. However, only plants where twenty per cent of their products go interstate are eligible for this program and numerous smaller plants are left out. Several other states do have a state meat inspection service (e.g. California and Pennsylvania) but many packers operate with little or no inspection.

In Virginia some of the cities have maintained an inspection service which has been adequate. The thought was advanced that a central state agency would be able to conduct a broader and more uniform service; hence the program was established in the State Health Department.

The Virginia program is under the direction of a veterinarian with considerable experience in meat inspection. Lay meat sanitarians will be assigned to the various plants participating in the plan to supervise sanitation and routinely examine each carcass or product processed. Where slaughtering is carried on a veterinarian residing in the area will be assigned to conduct final post mortems on those animals found in questionable condition. The live animals are observed for signs of disease and all vital organs including the lymphatic system are scrutinized post mortem for gross pathology. When necessary, histopathological work is carried out to facilitate final decisions. Chemical and serological tests are conducted to determine the composition of various products. Nothing will be left to chance in assuring the consuming public of a wholesome end-product.

Most of the urban areas of the State, on the basis of this new program, are planning to establish requirements restricting the sale of meat in their jurisdiction to that inspected by the Federal Government, the State, or an inspection service approved by the State Health Department. This should go far towards promoting uniform standards for meat and meat products throughout Virginia.

Since the service must be self-supporting under the present act, a fee is charged against the participating plant on a per hour basis. This money is paid to the State and is used in furnishing the various auxiliary necessities, travel, and salaries. All personnel involved in an official capacity are State employees and are in no way subject to undue pressure from the plant operator. The regulations provide for the operators' right to appeal decisions to higher authority when legitimate grievances arise.

Each wholesale cut from a meat carcass and all packages of meat products processed under this inspection service bear the seal "Inspected and Passed, Virginia State Department of Health".

The service is available to any qualified packer in the State who indicates a willingness to cooperate under the regulations. After an application is received, a thorough inspection is made of the plant, facilities and surroundings. When inadequacies are

corrected, inspection is begun as soon as qualified personnel are available.

It is hoped that this service will do much to enhance the prestige of Virginia meat packers and assure the consuming public of another reliable source of clean, wholesome meat and meat products.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	Dec. 1954	Dec. 1953	Jan.-Dec. 1954	Jan.-Dec. 1953
Brucellosis	1	2	44	58
Diphtheria	3	17	36	97
Infectious Hepatitis	148	258	3544	2551
Measles	207	123	23816	4928
Meningococcal Infections	15	20	105	193
Poliomyelitis	17	16	605	740
Rocky Mt. Spotted Fever	0	2	41	61
Streptococcal Infection (Including Scarlet Fever)	496	400	5061	5405
Tularemia	12	25	44	55
Typhoid Fever	10	2	68	54
Rabies in Animals	37	48	367	460

Antimalarial Drug in Blood Disease.

An antimalarial drug has been found useful in treating patients with a blood disease in which too many red cells are produced.

Dr. Raphael Isaacs, Chicago, said in the December 18 Journal of the American Medical Association that red blood cell counts which had risen above normal were cut back and held steady by pyrimethamine.

The drug, used to treat malaria, is known to act against folic acid, a natural vitamin which helps in the production of red blood cells. Pyrimethamine was used by Dr. Isaacs to treat patients with polycythemia vera, a type of anemia in which the bone marrow creates red blood cells faster than the body can use them. There appeared to be no ill effects from the drug, but that it probably should not be used during pregnancy. Improvements brought about by pyrimethamine included normalizing of the red cell count, cessation of headaches and joint pain, lowering of blood pressure in hypertensive patients, decrease in itching, and "a feeling of well being."

Eyestrain May Not Be Caused by Defects.

Eyestrain, and the bleary look that sometimes goes with it, may be a product of civilization and not of disease or defect.

An item in the November 20 Journal of the American Medical Association said that eye strain is considered to be mostly muscle fatigue, resulting not so much from total expenditure of energy as from constant shifting and changing adjustments in a "futile groping" after a perfect picture.

Biologically the eyes were adapted "for relatively simple purposes—to look for enemies and for food," a consultant said in answer to a query to the Journal. Although the conditions in which we live today are accepted as normal, the eyes may not have evolved enough to meet the demands of "unremitting close work imposed on them by a highly complex and artificial civilization."

Some eyestrain is due to the tiring of higher perceptual processes, such as interest and attention, and some is mental-emotional rather than biological.

"Many a patient with bitter complaints concerning eyestrain and difficulty in carrying out the day's activity is but manifesting his hostility to his work, his home, or other factors beyond his control."

Medico-Legal Notes . . . .

Marriage, Divorce and Mental Disorder

"The contract to marry is extremely simple. It does not require a high degree of intelligence to comprehend it." By this dictum, one court indicated that a man might be mentally incompetent to buy a crate of cheese while he could be mentally competent to marry. In laying down this rule, the judges were not being unromantic. They were recognizing one of the facts of life. That fact is: every child is familiar with the give and take implications of marriage. Even a five year old knows the standard American marriage pattern. Daddy is away all day earning the money and in return mother cares for the children, cleans the house and cooks the meal. Thus the obligations implicit in the marriage contract are simple: daily work in return for daily work. The average child can grasp it.

And it follows, therefore, they will not set aside a marriage on the theory that the spouse did not know his obligations—they will not annul such a marriage unless there is overwhelming evidence that the husband or wife was so deteriorated, so confused as to lack realization of even this fundamental obligation. And this, remember, is within the ken of a five-year old child.

Any contract may be set aside if it is shown that one of the parties did not know what he was doing. If a man is so defective mentally—or so confused, so deteriorated, so drunk, that he really did not know what it was all about when he said "I do", the courts will annul that marriage. But it is against public policy to annul marriages. So this step will not be lightly taken. The assumption is that when a pair of adults marry they know what they are getting into. Anyone who wants to challenge that assumption has to prove the lack of capacity. No matter what the clinical diagnosis, the incompetency is not assumed.

The doctor is sometimes asked to testify that the bride or groom did not know what he (she) was doing at the time the marriage was consecrated. This comes up particularly with marriages performed when one of the spouses was drunk. Sometimes the question is raised when the bride is a young teenager. Or one of the parties might be a mental defective. The criterion in each case is not the diagnosis, but rather the question of whether the party had wit enough to know what he was surrendering by marriage and to know what obligations he was assuming. The fact that he could not pay off on those obligations is not important at this stage. The only question is: did he know the obligations? If he did not, was this because of mental disorder or because of lack of sophistication? If because of mental disorder, the doctor can say that the partner lacked capacity to marry. This does not automatically mean annulment, however. Courts are loath to annul marriages and there are several legal criteria in addition to this medical one.

Sometimes an effort is made to annul a marriage because of fraudulent concealment of mental disorder. Now fraud can annul a marriage—but it is only that species of fraud which goes to the "essence" of the marriage. If a young man, while wooing a maid, says he is president of the company, earning $25,000 a year when, in truth, he is simply the hand who packs the frankfurters, earning only $1500 a year, this is, of course, a fraud. But the misled bride can no more have her single status restored than she can get back her virginity. For this fraud, say the courts, does not go to the "essence" of the marriage. Misrepresentation about one's skills, education, character, income, reputation, and ability to cook are simply part and parcel of the technic of courtship, and are no more "fraudulent" in this sense than the puffs one sees daily in television. They may be misleading, but the doctrine of *caveat emptor* applies in courtship as in advertising.

Actually, fradulent concealment of a mental disorder is almost a self-contradiction. Fraud implies *willful* deceit. But if the mental disorder is serious enough to wreck the marriage, it is serious enough to impair the person's accountability. If the fraud thus is not "willful", it is no fraud. In any event, the rule about dissolving marriage to an incompetent spouse is for the protection of the sick one, not for the protection of the healthy spouse.

If the disorder is a hereditary one, or if it is loathsome, crippling or contagious, then its *willful* concealment might be grounds for annulment. But even here, the healthy spouse would have to show

Contributed by HENRY A. DAVIDSON, M.D. DR. DAVIDSON, *author of the standard* Forensic Psychiatry (*Ronald Press 1953*), *is instructor in Legal Medicine at the Medical College of Virginia and Assistant Superintendent of the Essex County Hospital at Cedar-Grove, N. J.*

that his partner deliberately and knowingly concealed the disorder with the intent to lure the other into marriage.

With respect to divorce, the problem is different. In the first place, psychosis (insanity) is, in most states, a complete bar to divorce. Though a woman may be childless and only 20 years old, she is forever tied to her psychotic husband even though he is destined to spend the next 45 years in the back wards of a state hospital. She cannot sue for divorce, for divorce implies misconduct on the part of the defending spouse. And mental disease is not misconduct. There are a few states which allow some kind of judicial dissolution of marriage if the spouse is irrevocably psychotic. But in most states the doctrine is that the couple took each other "in sickness and in health till death do us part." And mental disease is sickness.

Willful refusal to engage in sexual intercourse is considered as "desertion" in most states. If desertion is a ground for divorce (and it usually is) then willful refusal to engage in copulation is a ground for divorce. The operating word here is "willful". Ordinarily a man does copulate if he can, so that the husband's failure to, or inability to copulate, is generally considered to be non-willful. It therefore is not a ground for divorce. In rare cases, it might be shown that it *was* willful. (As in one case where, because of his religion, the husband would not use contraceptives, but did not want children; so he willfully refused to engage in coitus with his wife, using a sterile mistress as his outlet. The wife could not prove the adultery, but she could prove the "desertion".) If the wife refuses to engage in, or submit to, sexual intercourse because of neurotic fears, because of prudishness, because of hysterical belief that sex is sin, or because of neurotic vaginismus, then her behavior is generally considered willful, and therefore is a form of desertion. Regardless of what the doctors say, most courts take the position that such a reaction on the part of the wife is a willful denial of the husband's "rights". The psychiatrist may consider such behavior by the wife as a form of illness. The judge is more likely to construe it as a deliberate evasion of a "duty". Most laws, it appears, are written by men.

Book Announcements . . .

Hugh Roy Cullen. A Story of American Opportunity. By ED KILMAN and THEON WRIGHT. Illustrated by Nick Eggenhoffer. Prentice-Hall, Inc., New York. 1954. viii-376 pages. Cloth. Price $4.00.

Handbook of Emergency Toxicology. A Guide for the Identification, Diagnosis and Treatment of Poisoning. By SIDNEY KAYE, B.S., M.Sc., Toxicologist, Office of the Chief Medical Examiner, Commonwealth of Virginia; Associate Professor of Legal Medicine, Medical College of Virginia; etc. Charles C. Thomas, Springfield, Illinois. 1954. xviii-303 pages. Cloth. Price $5.75.

Review of Medical Microbiology. By ERNEST JAWETZ, Ph.D., M.D., Professor of Bacteriology and Lecturer in Medicine and Pediatrics, University of California; JOSEPH L. MELNICK, Ph.D., Professor of Epidemiology, Yale University School of Medicine; and EDWARD A. ADELBERG, Ph.D., Associate Professor of Bacteriology, University of California. Lange Medical Publishers, Los Altos, California. 1954. 360 pages. Illustrated. Price $4.50.

Handbook of Medical Treatment. Edited by MILTON J. CHATTON, M.D., SHELDON MARGEN, M.D., and HENRY D. BRAINERD, M. D., Fourth Edition. Lange Medical Publishers, Los Altos, California. 1954. 569 pages. Cloth. Price $3.00.

Ciba Foundation Symposium On the Kidney. Arranged jointly with the Renal Association. A. A. G. LEWIS, B.Sc., M.D., M.R.C.P., Editor for the Renal Foundation. G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., B.CH., Editor for the Ciba Foundation. Assisted by JOAN ETHERINGTON. Little, Brown and Company, Boston. 1954. xvi-333 pages. With 125 illustrations. Cloth. Price $6.75.

This Pace Is NOT Killing Us. By J. I. RODALE. Rodale Books, Inc., Emmaus, Pennsylvania. 1954. 64 pages. Price $1.00.

The Adolescent Exceptional Child. A Realistic Approach to Treatment and Training. Proceedings of the 1954 Spring Conference of the Child Research Clinic of The Woods Schools, held in New Orleans, April 9 and 10. Copies of the pamphlet are available without charge by writing to the Child Research Clinic of the Woods Schools, Langhorne, Pennsylvania.

When Minds Go Wrong. By JOHN MAURICE GRIMES, M.D., Formerly Staff Member of the Council on Medical Education and Hospitals, American Medical Association. The Devin-Adair Company, New York. 1954. ix-246 pages. Cloth. Price $3.50.

The City of Hope. By SAMUEL H. GOLTER. G. P. Putnam's Sons, New York. 1954. xii-177 pages. Illustrated. Cloth. Price $3.50.

The Reproductive System. The Ciba Collection of Medical Illustrations. Volume 2. A Compilation of Paintings on the Normal and Pathologic Anatomy. Prepared by FRANK H. NETTER, M.D. Edited by Ernst Oppenheimer, M.D. With a Foreword by John Rock, M.D., Clinical Professor of Gynecology, Harvard Medical School. Commissioned and published by Ciba Pharmaceutical Products, Summit, New Jersey. 1954. xvi-286 pages. Price $13.00.

Woman's Auxiliary . . .

President—Mrs. Maynard Emlaw, Richmond
President-Elect—Mrs. Mervin W. Glover, Arlington
Recording Secretary—Mrs. J. W. Carney, Newport News
Corresponding Secretary
Mrs. Levi W. Hulley, Jr., Richmond
Treasurer—Mrs. William C. Barr, Richmond
Publication Chairman—Mrs. Wm. S. Grizzard, Petersburg

It's Your A.M.A.

The enthusiastic Auxiliary member says: "It's my A.M.A., too!" To be able to support her conviction with facts and to oppose successfully criticism of its activities and organizational structure, she herself must be well informed of them.

The American Medical Association was founded in Philadelphia, Pennsylvania, on May 5, 1847, as a non-profit public service institution to protect the public health and to provide the highest quality of medical care for the American people. Its purposes were to promote the science and art of medicine, to organize the medical profession and safeguard its worthy interest, and to elevate the standards of medical education and practice. Its objectives have not changed through the years.

The purpose of the Woman's Auxiliary to the American Medical Association is to assist in the program for the advancement of medicine and public health; therefore, it is essential that auxiliary members have a clear understanding of how the Association functions, its service to the profession, and its service to the general public.

Physical structure: The modern nine-story office building at 535 North Dearborn Street, Chicago, is the control center of A.M.A.'s activities. Here 900 employees carry on the work of the Association's 34 councils, committees, bureaus and departments.

A.M.A.'s representational structure is similar to that of the United States. Policies are determined by a House of Delegates composed of elected representatives of the state and territorial medical associations, the scientific sections and appointed representatives of federal medical services.

Services to the profession

The American Medical Association:

(1) Provides postgraduate education through its annual and clinical educational meetings and its weekly medical journal and nine monthly specialty journals.

(2) Assures good medical education and hospital training by requirement of certain high standards.

(3) Maintains a national doctor placement service.

(4) Provides assistance on medico-legal problems, and through the Washington office represents the profession in our national government.

(5) Publishes a Directory which lists, with biographical material, the legally qualified physicians in the United States and Canada; publishes the Standard Nomenclature which is the classification of accepted terminology used by 70% of the nation's hospitals for disease and operation index filing; publishes the New and Non-official Remedies which lists articles and preparations found acceptable under rules of Council on Pharmacy and Chemistry.

(6) Encourages ethical medical practice through emphasis on local, state and national levels of an accepted code of ethics, the A.M.A. Principles of Ethics.

Annual dues are $25.00; of this, $15.00 is for the Journal subscription and the remaining $10.00 is used for the countless many other activities.

Service to the Public

Some of the ways in which A.M.A. aids the public are:

(1) By evaluating drugs, special dietetic foods, and therapeutic and diagnostic devices as to reliability, proven therapeutic value and limitations.

(2) The Committee on Cosmetics evaluates cosmetics on basis of set standards.

(3) The Committee on Pesticides promotes coordination of research and medical activities involving use of insecticides, rodenticides, herbicides.

(4) Council on Foods and Nutrition encourages good practices in food advertising and labeling, and provides factual information about the importance of nutrition in combating disease.

(5) A special bureau investigates and disseminates information on quacks, medical fads, secret remedies and various phases of pseudo-medicine.

Presented at the Eleventh Annual Conference of State Presidents, Presidents-Elect and National Committee Chairmen, Woman's Auxiliary to the American Medical Association, held November 16-18, 1954 at the Drake Hotel, Chicago.

(6) Publishes "Today's Health" which provides authentic health information to the lay reader.

These are but a few of the services provided to the physician and to the general public. In addition, the Chicago office gives willing assistance to auxiliary members whenever called upon.

The word "auxiliary" is defined as meaning *to influence, to assist,* and *to support,* and the members of the Woman's Auxiliary to the American Medical Association will be better able to fulfill these functions when they are accurately informed as to what our A.M.A. stands for.

Lucia K. Emlaw (Mrs. Maynard R.)
President, Woman's Auxiliary to the Medical Society of Virginia

Correspondence . . . .

Incidence of Goiter

To The Editor:

The recent paper by Philips on the "Incidence of Goiter in Southwest Virginia (Virginia Medical Monthly, 81, 386-7, 1954) prompts me to recall to your readers that goiter was once common in certain places in that region.

In 1831, Dr. John T. Smith wrote (Gibson, W., Institutes and Practice of Surgery, 8th edition, Philadelphia, 1850, Vol. 2, p. 61):

"At King's Salt Works, in the county of Washington, Virginia, and not far from my own residence, this disease has prevailed for a number of years; . . . Persons living at the distance of a half, or even quarter of a mile are not subject to the disease.

"Contrary to what might be supposed from the aspect of the neighboring county, this disagreeable affliction is of exceedingly rare occurrence in this part of the state, with the exception above alluded to . . . every woman who goes to King's Saltworks to live, previously makes up her mind to become sooner or later a subject of goiter."

Some years later, the disease seems to have become more general and as frequent as in Ohio at that time. In 1850, Daniel Drake wrote from Wytheville (Western Lancet, 11, 558-569, 1850):

"*Goiter.* Cases are scattered here and there. I think they are not more numerous, in proportion to the population, than in the valleys of the Scioto and Cuyahoga."

It would be interesting to know if goiter is still common in Saltville or in the vicinity of Wytheville and, if not, if there is any information as to when the change took place.

I should appreciate hearing from any of your readers who have any information on this subject.

Isidor Greenwald
Professor Emeritus, New York University College of Medicine.
550 First Avenue
New York 16, N. Y.
December 10, 1954.

President's Message . . . .

The Cost of Medical Care

ALL of us know without reference to statistics that the cost of medical care has increased to such an extent that an ordinary illness can be catastrophic to an ordinary family and the cost of care of medical indigents has become a terrific burden to the taxpayer. The medical profession can do more to alleviate this steadily increasing expenditure of money than any other group, and I am afraid we are not half trying.

It is obvious that many modern and expensive therapeutic agents have saved many lives, have rehabilitated many invalids, and in spite of the initial high cost have actually reduced the total expenditure. It is also obvious that the routine and, much too often unnecessary, use of these drugs has added tremendously to the total cost. Furthermore, when the older preparations have been produced in quantity and the price has become reasonable, the doctor much too often abandons them for a new expensive one when the old one would do just as well.

It is evident too that there is profligate use of laboratory procedures. Perhaps the greatest waste of money is in unnecessary x-ray examinations. It seems almost routine for the doctor to minimize his ability to diagnose pulmonary conditions when he can learn so much from x-ray pictures. It should not be forgotten, however, that there are many lung and other changes in the body which are not revealed by roentgen studies. The same applies to many other physical and biochemical procedures.

Finally it is obvious that there is much unnecessary hospitalization of patients. Some of the increase in hospital patients is justified by the changes that have developed in the average modern home, but a large proportion is due to indulgence of the doctor, particularly the various specialists, to his own and the patient's convenience. Many in this latter group have hospital insurance and this has resulted in greater increases in the rates for such coverage. A large portion of the hospital care of indigent patients is in the hospitals of our teaching institutions, these patients have a much longer average stay than private patients, some of this is justified, but a considerable reduction in this field should be made. The waste and unnecessary use of expensive material in all hospitals offer another field for major economy.

The cost of living has become terrific, this cost of keeping our people alive and healthy can be materially reduced by the members of The Medical Society of Virginia.

Carrington Williams

President

Editorial . . . .

Cortisone and ACTH

SIX years have passed since the dramatic appearance of cortisone and ACTH on the medical scene. The initial striking success of these agents in treating rheumatoid arthritis was soon followed by similarly spectacular results in many other diseases and enthusiasm ran high. A note of caution was introduced as various undesirable and sometimes serious side effects were encountered. Then it became increasingly apparent that continued treatment was necessary to maintain improvement in most conditions treated. Enthusiasm waned and a note of pessimism appeared. The statement that cortisone and ACTH "do not cure anything" sounded shocking at first but then its full truth sank in. What can we say of these agents today? Are they the priceless boon to the sufferer that we once thought, or are they treacherous drugs to be avoided except as a last resort? Elsewhere in this issue there is presented a symposium on the treatment of asthma. Undoubtedly the use of cortisone and ACTH is referred to in these papers. It seems appropriate at this time to review some of the facts about these agents.

ACTH or adrenocorticotropic hormone is secreted by the anterior lobe of the pituitary gland and stimulates the adrenal cortices to greater output of adrenocortical hormone (ACH). The exact nature of ACH is not known but it appears to consist of a combination of steroids which may all be derived from a single parent compound. Cortisone (compound E) and hydrocortisone (compound F) are two steroids which have been isolated from the adrenal gland, which have potent effects practically identical with those of adrenocortical hormone. Commercial ACTH is prepared from the pituitary glands of animals, but cortisone and hydrocortisone are both made synthetically.

Among the many effects of adrenocortical hormone the most important appears to be its ability to block the effect of various injurious agents on body cells and thus to protect the cells from damage. This constitutes an integral part of the total body defense mechanism. In time of stress or danger the brain is informed of the need for extra protection and stimulates the pituitary to discharge more ACTH, which whips up the adrenal glands to greater output of ACH. Thus the body cells are fortified to better withstand the danger. Whenever the blood level of ACH rises too high, this exerts a suppressive effect on the pituitary production of ACTH, and the balance is restored. Thus an optimum amount of circulating adrenocortical hormone is assured in health and in disease. There are states of continuously excessive production of ACH, or hypercorticoidism, which give rise to the clinical picture known as Cushing's syndrome. Inadequate ACH output, or hypocorticoidism, is exemplified in Addison's disease.

The use of cortisone or hydrocortisone in Addison's disease is a form of substitution therapy comparable to giving insulin to a diabetic. A hypocorticoid individual is rendered eucorticoid. Dosage is small, usually 12.5 mg. to 25 mg. daily. There are no side effects and the patient's well being is markedly restored. Similarly ACTH may be given in small amounts in pituitary insufficiency with secondary adrenal failure, to restore normal adrenal activity. In actual usage the necessity for continued injections makes ACTH impractical, and cortisone substitution treatment is usually preferred even in pituitary failure.

The major use of cortisone and ACTH, however, is in treating a large group of diseases which include rheumatoid arthritis, other collagen diseases, asthma, allergies, disorders of the skin and eye, and a variety of other maladies. In none of these conditions is any adrenal deficiency present. Cortisone and ACTH are not given as substitution therapy, but in large doses with the deliberate aim of producing a state of

hypercorticoidism. The beneficial effect on the disease being treated depends entirely on the degree of hypercorticoidism produced. The noxious agent which is causing the disease is unaffected, and indeed may be entirely unknown, but its harmful effect on the cells of the body is blocked and the signs and symptoms of the disease are abolished. Thus pneumonia may be abolished while pneumococci fluorish in the lungs, and asthma disappears while hypersensitivity may remain. The clinical improvement is purchased, however, at the cost of continuing hypercorticoidism, and any or all of the signs of Cushing's syndrome may be expected if treatment is prolonged.

The disadvantages of this type of treatment are readily apparent. First the cause of the disease being treated is not removed, and unless it is by nature self limited, the disease will surely recur when cortisone or ACTH is stopped. This necessitates indefinitely continued treatment in most cases. Secondly the maintenance of a continued state of hypercorticoidism itself constitutes a considerable hazard. The danger of producing diabetes or hypertension is not as great as was once feared, but more subtle dangers lie in breaking down resistance to the spread of tuberculosis or other infection, in favoring the development of peptic ulcer, in increasing the work of the heart and kidneys by salt loading, and, finally, in the masking of various complications which may develop. The third disadvantage is the suppression of the patient's own adrenal glands when cortisone is given, and the suppression of pituitary responsiveness to stress when ACTH is given. When prolonged treatment with either ACTH or cortisone has been given, cessation of treatment is inevitably followed by a period of hypocorticoidism which may last for weeks or months. Exposure to stress during this period may be fatal unless protective cortisone is reinstituted. Neither tapering off of cortisone dosage nor the administration of ACTH before stopping cortisone will fully obviate this danger.

What can we say about the use of a type of therapy as unphysiologic and as potentially dangerous as this, where one disease is produced to relieve another? We can say first that cortisone or ACTH treatment should never be undertaken lightly. These agents should be given only in diseases that are likely to be otherwise fatal or so disabling as to incapacitate the patient, and only when all other types of treatment have been exhausted. Thus we would consider it unwise to use cortisone for relief of occasional bouts of asthma, but would give cortisone or ACTH to a patient in intractable status asthmaticus where all other remedies had failed. We would not use cortisone in early rheumatoid arthritis, but would consider it justified in advanced and crippling cases. The dose should be kept as low as possible, with the aim of making pain bearable rather than of total relief of all symptoms. In treating certain usually fatal conditions such as pemphigus, or disseminated lupus erythematosus, such large doses may be necessary to control the disease that a definite Cushing's syndrome may be inevitable. This is justified if we are thereby keeping the patient alive. Testosterone, salt restriction and added potassium may help alleviate some of the features of the Cushing's syndrome.

Before beginning cortisone or ACTH in any condition, a physician must look ahead to the future and must assume responsibility for either the continuation of treatment or the necessary precautions and long period of after-care when the drug is withdrawn. In treating a condition that is by nature self-limited, such as acute rheumatic fever, or acute exfoliative dermatitis, it is hoped that a limited course of treatment may be given and the drug then withdrawn. Or in treating a disease that may show spontaneous remissions, such as the early stage of disseminated lupus erythematosus, there is still hope that the drug may later be omitted and given only for exacerbations. But in treating a disease that is by nature chronic, a permanent program of cortisone must be planned and the problem is to keep the dosage to the minimal amount compatible with reasonable control of the disease. The physician should familiarize himself with

the various routes of administration and dosage forms of cortisone, hydrocortisone, and ACTH. He should be familiar with the various phenomena of the hypercorticoid state and alert to the warning signs of serious trouble. He must know the contra-indications to the use of these agents, such as cardiac or renal failure, peptic ulcer and tuberculosis. He must understand that pre-existing diabetes or hypertension may be aggravated, and that unfavorable reaction are likely in patients of neurotic or unstable temperament.

It should be stated that the above remarks pertain chiefly to the systemic use of these agents, oral or parenteral. Local or topical use of cortisone or hydrocortisone may be effective without producing any general state of hypercorticoidism. It should be constantly remembered, however, that even local effects depend on the blocking action of the drug, and in no way affect the cause of the condition being treated.

Indiscriminately used, these potent drugs can do untold harm. But with proper knowledge and judgment the physician may use them confidently and with gratifying results. They still represent one of the major therapeutic accomplishments of our age.

H. St. George Tucker, Jr., M.D.

Society Proceedings . . . .

Rockingham County Medical Society.

New officers of the Rockingham County Medical Society for 1955 are: President, Dr. B. W. Nash, Timberville; vice-president, Dr. Jacob Huffman, Dayton; and secretary-treasurer, Dr. William J. Hotchkiss, Broadway.

Medical Society of Northern Virginia.

At the meeting of this Society on December 14th, the following officers were elected: President, Dr. E. L. Hopewell, Strasburg; vice-president, Dr. H. P. Maccubbin, Winchester; and secretary-treasurer, Dr. Dennis P. McCarty, Front Royal.

Williamsburg-James City Medical Society.

The following new officers were elected at the meeting on December 8th: President, Dr. E. B. Kilby, Toano; vice-president, Dr. Carlton J. Casey, Williamsburg; and secretary-treasurer, Dr. Linwood Farley, Williamsburg. They were installed on January 12th.

Virginia Peninsula Academy of Medicine.

Officers for the Academy for 1954-1955 are: President, Dr. O. W. Ward, Sr., Hampton; vice-president, Dr. Robert Peirce, Newport News; and secretary-treasurer, Dr. William T. Watkins, Jr., Newport News.

The Fredericksburg Medical Society

Has elected Dr. Joseph MacKnight as president for 1955. Dr. John B. Rose is vice-president, and Dr. H. Lee Earnhardt, secretary-treasurer.

Arlington County Medical Society.

The following will serve as officers of this Society for 1955: President, Dr. H. C. Bates, Jr.; vice-president, Dr. Hermann F. Diamant; secretary, Dr. Stephen J. Sheehy; treasurer, Dr. T. A. McGavin; and Member-at-large, Dr. J. R. B. Hutchinson.

Fourth District Medical Society.

Officers elected at the meeting on December 14th are: President, Dr. William B. McIlwaine, Petersburg; vice-presidents, Drs. Charles W. Scott, Burkeville, and Robert D. Keeling, South Hill; secretary-treasurer, Dr. John G. Graziani, Farmville; and Chairman of Steering Committee, Dr. J. B. Kiser, Emporia.

The Southwestern Virginia Medical Society

Will hold its next meeting in Radford on Thursday, April 14th. Dr. C. C. Hatfield, Saltville, is president, and Dr. Reverdy H. Jones, Jr., Roanoke, secretary-treasurer.

News . . . .

Calendar of Coming Events

Annual Congress on Medical Education and Licensure—Palmer House, Chicago, February 5-8

International College of Surgeons—Mid-Atlantic Division Regional Meeting—Statler Hotel, Washington, D. C., February 11-12

Tri-State Medical Association—Hotel Chamberlin, Old Point, Va., February 21-22

National Conference on Rural Health—Schroeder Hotel, Milwaukee, Wis., February 24-26

Aero Medical Association—Hotel Statler, Washington, D. C., March 20-23

International Academy of Proctology—The Plaza Hotel, New York City, March 23-26

Eastern States Education Conferences—New York Academy of Medicine, New York City, April 21-22

Virginia Society of Ophthalmology & Otolaryngology—Natural Bridge, Va., May 6-7

Virginia Academy of General Practice—Hotel Chamberlin, Old Point, Va., May 13-15

Richmond Committee on Arrangements.

The following are members of the Committee on Arrangements for the Annual Meeting of The Medical Society of Virginia to be held in Richmond, October 16-19:

General Chairman—Dr. John P. Lynch
Scientific Exhibits—Dr. Frank M. Blanton
Technical Exhibits—Dr. Oscar Hite
Press and Publicity—Dr. William H. Higgins, Jr.
Hotels and Halls—Dr. W. Linwood Ball
Entertainment—Dr. William F. Grigg, Jr.
Golf—Dr. C. C. Chewning, Jr.
Auxiliary—Mrs. J. R. Grinels and
Mrs. George H. Snead

Officers of Speciality Societies.

Specialty groups which met in conjunction with the First Interstate Scientific Assembly in Washington, October 31-November 3, elected the following officers:

Virginia Pediatric Society
President—Dr. E. L. Kendig, Jr., Richmond
Secretary—Dr. William Spencer, Richmond

Virginia Society of Anesthesiologists
President—Dr. W. E. Pembleton, Richmond
Secretary—Dr. John Rosenthal, Norfolk

Virginia Orthopedic Society
President—Dr. Allen M. Ferry, Arlington
Secretary—Dr. William Deyerle, Richmond

Virginia Society for Pathology
President—Dr. Edward Levy, Norfolk
President-elect—Dr. John Hooker, Danville
Secretary-Treasurer—Dr. George J. Carroll, Suffolk

Virginia Neuropsychiatric Society
President—Dr. Granville L. Jones, Williamsburg
Vice-President—Dr. Frank Strickler, Roanoke
Secretary-Treasurer—Dr. George Fultz, Richmond

Virginia Obstetrical and Gynecological Society
President—Dr. Eugene S. Groseclose, Roanoke
President-elect—Dr. George S. Hurt, Roanoke
Secretary-Treasurer—Dr. Chester D. Bradley, Newport News

Virginia Section, American College of Physicians
Chairman—Dr. Alex F. Robertson, Staunton
Secretary-Treasurer—Dr. James F. Waddill, Norfolk

Virginia Radiological Society
President—Dr. George Cooper, Charlottesville
President-elect—Dr. Allen Barker, Roanoke
Secretary-Treasurer—Dr. P. B. Parsons, Norfolk

Virginia Diabetes Association
President—Dr. Thomas S. Edwards, Charlottesville
Vice-Presidents—Dr. William A. Read, Newport News
Dr. Collier W. Salley, Norfolk
Secretary-Treasurer—Dr. James F. Conner, Kecoughtan

Dr. Carrington Williams, Sr.,

President of The Medical Society of Virginia, has received an additional honor by his election as President of the Southern Surgical Association at its annual convention held at Hollywood Beach, Florida, in December. He has been treasurer of the Association for ten years.

Dr. W. Taliaferro Thompson, Jr.,

Richmond, has been named chief of medical services at McGuire Veterans Administration Hospital and promoted to associate professor of medicine at the Medical College of Virginia. At McGuire's he succeeds the late Dr. John Powell Williams.

Lynchburg General Hospital Staff.

Dr. Holcombe Hurt has been elected chief of staff of the Lynchburg General Hospital, succeeding Dr. L. R. O'Brian, Jr. Dr. J. E. Warren was named assistant chief and Dr. Donald Shotton was elected as secretary.

Dr. Kyle Mundy was elected as chief of surgical services, succeeding Dr. Macey Rosenthal.

Dr. Dennis P. McCarty

Has been elected president of the Front Royal—Warren County Chapter, Virginia Division, of the American Cancer Society.

The American Academy of General Practice.

Thirty-two of the nation's top medical authorities will participate in the program of the Seventh Annual Scientific Assembly in Los Angeles, March 28-31. Among the speakers are: Dr. Alton Oschner, New Orleans; Dr. Digby Leigh, Los Angeles; Dr. Hugh H. Hussey, Washington, D. C.; Dr. William Sodeman, University of Missouri; Dr. Lowell Goin, Los Angeles; Dr. Charles Larson, Tacoma; and Dr. Edward Weiss, Philadelphia.

There will be panel discussions on diabetes, childhood disasters, peripheral vascular diseases, neurology, endocrinology, handling athletic injuries and preserving the doctor's life. Other subject material that will be covered includes newer concepts of allergy therapy, anesthetic emergencies, treatment of the ambulatory fracture case, medical aspects of crime detection, using the laboratory in liver disease, and the negative roentgenogram.

Scientific exhibits will supplement the formal lecture program.

Bermuda-Nassau Cruise.

An eight-day cruise to Bermuda and Nassau has been arranged for physicians and their wives following the A.M.A. meeting at Atlantic City in June. The party will sail from New York on June 10th aboard the Furness Line steamer Ocean Monarch. The ship docks at St. George's Bermuda early Sunday morning, sailing again on Monday at 1 P.M. They will reach Nassau on Wednesday, leaving at midnight and docking in New York on Saturday, June 18th.

All space is being held for the A.M.A. and reservations should be made immediately. Contact W. M. Moloney, Chicago, Burlington and Quincy Railroad, 105 West Adams Street, Chicago.

Professor of Surgical Cardiology.

Dr. John Francis Dammann, Jr., has been appointed as associate professor of surgical cardiology in the department of surgery of the University of Virginia School of Medicine. He has worked intimately with Dr. William H. Muller, Jr., newly appointed chairman of the department of surgery over a period of six years, both at Johns Hopkins and the University of California, where Dr. Dammann has been assistant professor of pediatrics since 1950.

Conference on Crippled Children.

The Fourth Annual Conference on Crippled Children will be held March 2-3 at the Hotel Roanoke, Roanoke. This conference is sponsored each year by the Virginia Council on Health and Medical Care at the request of The Nemours Foundation of Wilmington, Delaware. The theme for this conference is "The Emotionally Disturbed Child" with Dr. Adelaide Johnson, child psychiatrist at the Mayo Clinic, and Dr. Samuel A. Kirk, Director, Institute for Research on Exceptional Children, University of Illinois, as the two main speakers. There will be a panel on Care and Treatment of the Emotionally Disturbed Child and one on Meeting the Needs of the Emotionally Disturbed Child in Virginia.

All physicians are cordially invited to attend the conference. For further details, address the Virginia Council on Health and Medical Care, 102 E. Franklin Street, Richmond.

For Sale

Modern office equipment, complete, including fluoroscope and electro-cardiograph and practice in Southside Virginia city. Excellent hospital facilities. Write Box #40, care the Monthly, Box 5085, Richmond 20, Va. (*Adv.*)

Wanted.

A physician for contract practice in coal camp. Write #30, care Virginia Medical Monthly, Box 5085, Richmond 20, Va. (*Adv.*)

Office and Equipment Available.

The office is located in Newport News, near the shipyard, and is fully equipped for private practice, with reception room, laboratory, consultation and examining rooms, and private bath. All the surgical instruments, operating equipment and laboratory apparatus will be appraised to be sold at a reasonable price. Doctor recently deceased. For full information contact Mrs. James E. Marable, 323-64th Street, Newport News. (*Adv.*)

Physician Wanted

For community of 1100 in central Virginia. For full information, write #35, care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Virginia (*Adv.*)

Residency Available.

A residency in otolaryngology at the University of Virginia, Charlottesville, is available July 1, 1955. Training is also given in maxillo-facial surgery and broncho-esophagology. For additional information, contact the Otolaryngologist in Chief, University of Virginia Hospital, Charlottesville, Virginia. (*Adv.*)

For Sale.

Best offer will take an electric Scanlan-Morris autoclave and an unused St. Luke's delivery bed. Must sell at once because of storage problem. A Lumetron electrocolorimeter, model 401A, in excellent condition for $150.00 and will guarantee for one year. Other miscellaneous equipment. Contact R. H. Ragland, 208 Richelieu Ave., S. W., Roanoke, or phone 25325. (*Adv.*)

Obituaries . . . .

Dr. Henry Adams Tabb,

Prominent physician of Gloucester, died January 7th following a heart attack. He was a native of Gloucester County and sixty-seven years of age. Dr. Tabb taught school for several years before he entered the Medical College of Virginia, from which he graduated in 1913. He had practiced in Gloucester since that time. Dr. Tabb had been an active member of The Medical Society of Virginia for forty years. At the time of his death, he was chairman of the Walter Reed Commission, the chief duty of which is the maintenance of the Walter Reed Home, "Belroi", located in Gloucester County. His wife survives him.

Dr. James Edward Marable,

Well known physician of Newport News, died November 27th, following a heart attack. He was a native of Isle of Wight County and sixty years of age. He received his medical degree from the University of Virginia in 1918 and had practiced in Newport News since that time. Dr. Marable was in the service during World War II, serving as Lieutenant Commander at the Great Lakes Training Station and the Brooklyn Navy Yard. As a Captain he served at an Oregon hospital, before returning to his practice in Newport News. For the past two years, Dr. Marable has been on the medical staff of the Newport News Shipbuilding and Dry Dock Company. He also served as a staff member at Mary Immaculate and Riverside Hospitals. Dr. Marable had been a member of The Medical Society of Virginia for thirty-four years. His wife, two daughters and a son survive him.

Dr. Frederick Oliver Fay,

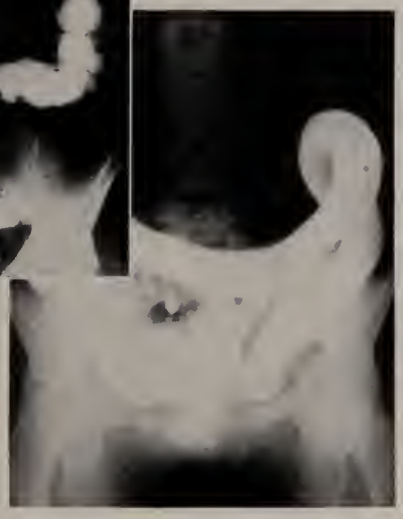
Prominent Norfolk physician, died November 13th, following a heart attack. He was fifty years of age and a graduate of the Medical College of Virginia in 1930. Dr. Fay was an eye, ear, nose and throat specialist and had practiced in Norfolk since 1940. He was in service during World War II, serving as Lieutenant Commander and later as Captain at the Naval Operating aBse at Norfolk and at San Juan, Puerto Rico. Dr. Fay was official ophthalmological consultant to the Norfolk City Venereal Disease Clinic. He was a member of many civic and fraternal organizations. Dr. Fay had been a member of The Medical Society of Virginia since 1941. Two sons survive him.

Dr. James Thomas Shelburne,

Critz, died December 25th, at the age of sixty-five. He was a graduate of the Medical College of Virginia in 1915. Dr. Shelburne was in the Service during World War I, following which he practiced for a while in West Virginia. He located at Critz in 1921 and also had an office at Martinsville. Dr. Shelburne had been a member of The Medical Society of Virginia for thirty years. A daughter survives him.



Normal Colon



Ulcerative Colitis



Atonic Colon

Smoothage in Correction of Colon Stasis

To initiate the normal defecation reflex, the "smoothage" and bulk of Metamucil provide the needed gentle rectal distention.

Once the habit of constipation has been established, due to any of a large number of causes, it becomes a major problem. Self-medication with irritant or chemical laxatives, or repeated enemas, usually causes a decreased, sluggish defecation reflex and may result in its complete loss.

Rectal distention is a vital factor in initiating the normal defecation reflex, and sufficient bulk is thus of obvious importance in restoring this reflex. Metamucil provides this bulk in the form of a smooth, nonirritating, soft, hydrophilic colloid which gently distends the rectum and initiates the desire to evacuate. Metamucil demands extra fluid, imparting even greater smoothage to the intestinal contents.

It is indicated in chronic constipation of various types—including distal colon stasis of the "irritable colon" syndrome, the atonic colon following abdominal operations, repressions of defecation after anorectal surgery and in special conditions such as the management of a permanent ileostomy. Metamucil is the highly refined mucilloid of Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

The average adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice, followed by an additional glass of fluid if indicated.

Metamucil is supplied in containers of 4, 8 and 16 ounces. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

SEARLE

Saint Albans Sanatorium

RADFORD, VIRGINIA



125-BED PRIVATE PSYCHIATRIC HOSPITAL FOR THE TREATMENT OF NERVOUS AND MENTAL DISORDERS, INCLUDING ALCOHOLISM AND ADDICTION.

STAFF

James P. King, M. D., Director

James K. Morrow, M. D. Thomas E. Painter, M. D. Daniel D. Chiles, M. D.

James L. Chitwood, M. D., Medical Consultant

Affiliated Clinic Offering Psychiatric and Psychological Evaluation and Therapy:

BLUEFIELD MENTAL HEALTH CENTER

1400 Bland Street Bluefield, W. Va.

David M. Wayne, M. D., Director

TUCKER HOSPITAL Inc.

212 West Franklin Street,

Richmond, Virginia

A private hospital accepting for diagnosis and treatment organic neurological conditions, selected psychiatric and alcoholic cases, metabolic disturbances of an endocrine nature, individuals who are having difficulty with their personality adjustments, and children with behavior problems. Patients with general medical disorders admitted for treatment under our staff of visiting physicians.

Under the Professional Charge of

DR. HOWARD R. MASTERS, DR. JAMES ASA SHIELD

AND ASSOCIATES



Specializing in the Treatment of Alcoholism

THE KEELEY INSTITUTE

447 W. WASHINGTON ST. PHONE 2-4413

GREENSBORO, N. C.

REGISTERED WITH THE COUNCIL ON EDUCATION AND HOSPITALS OF AMERICAN MEDICAL ASSOCIATION.
MEMBER AMERICAN HOSPITAL ASSOCIATION. MEMBER NORTH CAROLINA HOSPITAL ASSOCIATION.

A Modern Hospital for the Treatment of Alcoholism Exclusively

- A private hospital offering scientific, institutional, medical, psychological, reflex, reduction and other methods for the rehabilitation of consent patients suffering from alcoholism.

- All equipment modern with facilities to take care of 50 patients both male and female.

- Under the direction of a competent licensed M. D. with five consultant physicians subject to call. Registered Nurses in charge 24 hours daily.



Approved and licensed by the Virginia State Hospital Board. Atop beautiful Mt. Regis, five miles West of Roanoke, on Highway 11, in the quiet serene mountains of Virginia, conducive to rest, comfort and recuperation. Doctors inspection invited. For information phone or write.

WHITE CROSS HOSPITAL

Five Miles West of Roanoke on Route No. 11.
Salem, Virginia — Phone Salem 287

WHITE CROSS HOSPITAL

Copyright 1948. H. N. Alford, Atlanta, Ga.

Appalachian Hall • Asheville, North Carolina

ESTABLISHED 1916



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, SR., M.D.
Diplomate in Psychiatry
WM. RAY GRIFFIN, JR., M.D.

MARK A. GRIFFIN, SR., M.D.
Diplomate in Psychiatry
MARK A. GRIFFIN, JR., M.D.

For rates and further information write APPALACHIAN HALL, ASHEVILLE, N. C.

Medical College of Virginia

HOSPITAL DIVISION
RICHMOND, VIRGINIA

A health center using the latest methods of diagnosis and treatment of disease.

MEDICAL COLLEGE OF VIRGINIA HOSPITAL
OUT-PATIENT DEPARTMENT
SAINT PHILIP HOSPITAL
DOOLEY HOSPITAL

The patient's welfare is our primary interest.

C. P. CARDWELL, JR., *Director*

The . . . Thompson Homestead School

FOR EXCEPTIONAL CHILDREN

Year round private home and school for infants, children and adults on pleasant 250 acre farm near Charlottesville.

Write for booklet.

MRS. J. BASCOM THOMPSON, *Principal*

FREE UNION **VIRGINIA**

THE LOUISE C. GODWIN NURSING HOME, INC.

"Nursing care with kindness"

AGED AND CHRONICALLY ILL
MODEST RATES

LOUISE GODWIN TAYLOR, R.N., Pres.
MARGARET K. MILLER, Sec.-Treas.

Bus. 55514 **813 Stockley Gardens**
Res. 83046 **Norfolk 7, Virginia**

RIVERSIDE HOSPITAL, Newport News, Va.



A General Hospital (265 beds) with Departments in Medicine, Surgery, Obstetrics, Pathology, Radiology, Pediatrics and Nursing. The Hospital is accredited by the Council on Medical Education of the American Medical Association for training first year interns, residencies in the surgical specialties for one and two years, general practices two years full approval, internal medicine, and obstetrics and gynecology, and the School of Nursing is accredited by the Virginia State Board of Nurse Examiners.

DAVID E. WATSON,
Administrator

MISS MARY LOUISE HABEL, R.N.,
Director, School of Nursing

Gill Memorial Eye, Ear and Throat Hospital

Announces to the Profession

TWENTY-EIGHTH ANNUAL SPRING CONGRESS

in

OPHTHALMOLOGY AND OTOLARYNGOLOGY

April 4 to April 9, 1955

GUEST SPEAKERS

Henry L. Birge, M.D.---Hartford, Conn.
Paul Boeder, M.D.---South Bridge, Mass.
William B. Clark, M.D., F.A.C.S.
New Orleans, La.
Dan M. Gordon, M.D.---New York, N. Y.
Anderson C. Hilding, M.D.---Duluth, Minn.
Chevalier L. Jackson, M.D.---Philadelphia, Pa.
Bertha S. Klien, M.D.---Chicago, Ill.
Walter E. Loch, M.D.---Baltimore, Md.
T. G. Martens, M.D.---Rochester, Minn.
Daniel S. Miller, M.D.---Boston, Mass.
Thomas Paine, M.D.---Ann Arbor, Mich.
Major General Daniel Ogle, M.D.
Washington, D. C.
R. Townley Paton, M.D., F.A.C.S.
New York, N. Y.
James Purnell, M.D.---New York, N. Y.
Albert D. Ruedemann, M.D., F.A.C.S.
Detroit, Mich.
Robert E. Ryan, M.D.---St. Louis, Mo.
Richard Schneider, M.D.---Ann Arbor, Mich.
John Sheldon, M.D.---Ann Arbor, Mich.
G. Edward Tremble, M.D.---Montreal, Canada
Grant Ward, M.D.---Baltimore, Md.

For further information write:

Superintendent, Box 1789 **Roanoke, Virginia**

McGUIRE CLINIC

ST. LUKE'S HOSPITAL

RICHMOND, VIRGINIA

General Medicine

HUNTER H. McGUIRE, M.D.
MARGARET NOLTING, M.D.
JOHN P. LYNCH, M.D.
WM. H. HARRIS, JR., M.D.
JOHN B. CATLETT, M.D.

Orthopedic Surgery

JAMES T. TUCKER, M.D.
BEVERLEY B. CLARY, M.D.
EARNEST B. CARPENTER, M.D.

Ophthalmology, Otolaryngology

FRANCIS H. LEE, M.D.

General Surgery

WEBSTER P. BARNES, M.D.
JOHN H. REED, JR., M.D.
JOHN ROBERT MASSIE, JR., M.D.
JOSEPH W. COXE III, M.D.

Dental Surgery

JOHN BELL WILLIAMS, D.D.S.
GUY R. HARRISON, D.D.S.

Urology

AUSTIN I. DODSON, M.D.
CHAS. M. NELSON, M.D.
AUSTIN I. DODSON, JR., M.D.

Pediatrics

HUBERT T. DOUGAN, M.D.

Obstetrics

W. HUGHES EVANS, M.D.
W. H. COX, M.D.
JAMES M. WHITFIELD, M.D.

Bronchoscopy

GEORGE AUSTIN WELCHONS, M.D.

Roentgenology

JESSE N. CLORE, JR., M.D.
STUART J. EISENBERG, M.D.

Pathology

J. H. SCHERER, M.D.

Treasurer: RICHARD J. JONES, BS., C.P.A.

RICHMOND'S FINEST + ONE OF VIRGINIA'S LARGEST

TERRACE HILL NURSING HOME, INC.

"Understanding Care"



View Showing Part of 3½ Acres of Terrace Hill Nursing Home.

TERRACE HILL NURSING HOME is a privately managed nursing home specializing in 24 hour daily nursing care for elderly people, convalescent and chronic cases. Home-like atmosphere. Exclusive park-like grounds. Supervised diets. Nutritious food. Private and semi-private rooms with baths. Accommodations for 45 guests. Under supervision of a resident, registered nurse. Rates from $45.00 to $60.00 per week for room, board and general nursing care. Your inspection invited.

City, State and Nationally Approved and Registered

For Further Information or Reservation write to

DIRECTOR, Terrace Hill Nursing Home • 2112 Monteiro Ave. • Phone 3-3993 • Richmond 22, Va.

Third Decade of Nursing

MODERN IN EQUIPMENT

MRS. PLYLER'S

KATE E. PLYLER (1876-1947)

OLD IN TRADITION

NURSING HOME

MARY INGRAM CLARK

CONVALESCENT — CHRONIC — AGED

- Equipped for oxygen and transfusions
- 30 special & general nurses
- 24-hour nursing care
- Centrally located
- 50-bed capacity
- Dietician
- Rates from $42.00 to $70.00 per week for room, board and general nursing care.





For further information write or call MRS. GENE CLARK REGIRER, Supt.

1613-15-17 Grove Avenue—Richmond, Virginia—Telephone 84-3221

RICHMOND EYE HOSPITAL
RICHMOND EAR, NOSE AND THROAT HOSPITAL

(COMBINED)

RICHMOND, VIRGINIA



A new non-profit Community Hospital specially constructed for the treatment of Eye, Ear, Nose and Throat Diseases, including Laryngeal Surgery, Bronchoscopy and Plastic Surgery of the Nose.

Professional care offered a limited number of charity patients.

ADDRESS: JULIA WAGNER WATERS, R.N., *Administrator* **408 North 12th Street**

ST. ELIZABETH'S HOSPITAL

RICHMOND 20, VIRGINIA

STAFF

Guy W. Horsley, M.D.—General Surgery and Gynecology
D. Coleman Booker, M.D.—General Surgery and Gynecology
Austin I. Dodson, M.D.—Urology
Austin I. Dodson, Jr., M.D.—Urology
Douglas G. Chapman, M.D.—Internal Medicine
Elmer S. Robertson, M.D.—Internal Medicine
T. E. Stanley, M.D.—Internal Medicine
Fred M. Hodges, M.D.—Roentgenology
L. O. Snead, M.D.—Roentgenology
Hunter B. Frischkorn, Jr., M.D.—Roentgenology
Helen Lorraine—Medical Illustration

ADMINISTRATION

William Scott—Business Manager

SCHOOL OF NURSING

The School of Nursing is affiliated with The Johns Hopkins Hospital School of Nursing for a three months' course each in Pediatrics and Obstetrics, and with the Tucker's Hospital in Richmond for a 12 weeks course in Psychiatry.

Address: Superintendent of Nurses

STUART CIRCLE HOSPITAL

413-21 Stuart Circle
RICHMOND, VIRGINIA

Medicine:
Manfred Call, III, M.D.
M. Morris Pinckney, M.D.
Alexander G. Brown, III, M.D.
John D. Call, M.D.
Wyndham B. Blanton, Jr., M.D.

Obstetrics and Gynecology:
Wm. Durwood Suggs, M.D.
Spotswood Robins, M.D.
Edwin B. Parkinson, M.D.
David C. Forrest, M.D.

Orthopedics:
Beverley B. Clary, M.D.

Pediatrics:
Charles P. Mangum, M.D.
Edward G. Davis, Jr., M.D.

Ophthalmology, Otolaryngology:
W. L. Mason, M.D.

Pathology:
Regena Beck, M.D.

Anesthesiology
William B. Moncure, M.D.
Heth Owen, Jr., M.D.

Surgery:
A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr., M.D.

Urological Surgery:
Frank Pole, M.D.

Oral Surgery:
Guy R. Harrison, D.D.S.

Plastic Surgery:
Hunter S. Jackson, M.D.

Roentgenology and Radiology:
Fred M. Hodges, M.D.
L. O. Snead, M.D.
Hunter B. Frischkorn, Jr., M.D.
William C. Barr, M.D.

Physiotherapy:
Miss Etheleen Dalton

Director:
Charles C. Hough

RIVERSIDE CONVALESCENT HOME

Sophia & Fauquier Sts. **Fredericksburg, Virginia**



For convalescent, aged, chronically ill, and retired persons.

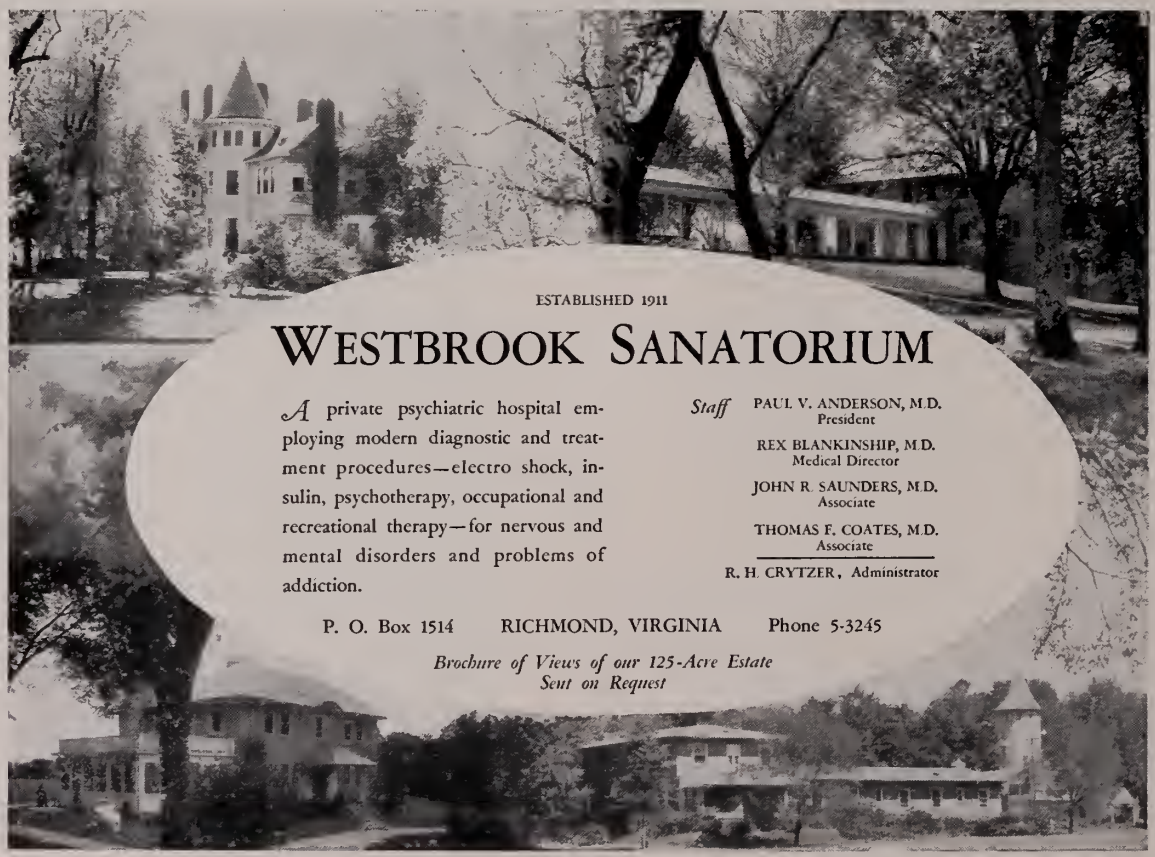
Centrally located in Historic Fredericksburg, on the beautiful Rappahannock, in the former Mary Washington Hospital Building. Completely redecorated and refurnished.

Eighty Bed Capacity

Medical Supervision

Inspection Invited

Rates:
$30.00 to $75.00 per week



ESTABLISHED 1911

WESTBROOK SANATORIUM

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

Staff
PAUL V. ANDERSON, M.D.
President
REX BLANKINSHIP, M.D.
Medical Director
JOHN R. SAUNDERS, M.D.
Associate
THOMAS F. COATES, M.D.
Associate

R. H. CRYTZER, Administrator

P. O. Box 1514 RICHMOND, VIRGINIA Phone 5-3245

Brochure of Views of our 125-Acre Estate
Sent on Request

JOHNSTON-WILLIS
HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

Every Virginia Doctor Should Have These Books!

The history of medicine in the Old Commonwealth from Jamestown to the beginning of the present century is a work every doctor should be proud to own. Complete and intensely interesting.

Medicine In Virginia

In 3 Volumes

Published under Auspices of
Medical Society of Virginia

Reduced price to members of the Medical Society of Virginia

3 Volumes for $5.75
(formerly $9.75)

Order through

Medical Society of Virginia
1105 West Franklin Street
Richmond, Virginia.

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

know your diuretic

will your cardiac patients be able to continue the diuretic you prescribe ?

uninterrupted therapy *is the key factor in diuretic control of congestive failure. You can prescribe* NEOHYDRIN *every day, seven days a week, as needed.*

TABLET

NEOHYDRIN®

BRAND OF CHLORMERODRIN

(18.3 MG. OF 3-CHLOROMERCURI-2-METHOXY-PROPYLUREA IN EACH TABLET)

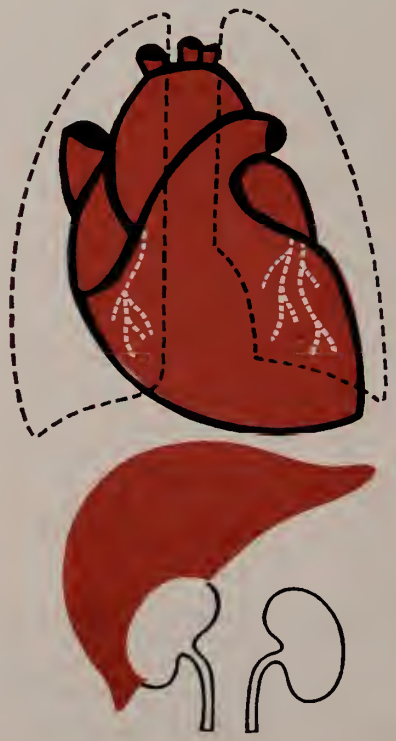
no "rest" periods... no refractoriness

acts only in kidney...

no unwanted enzyme inhibition in other parts of the body.

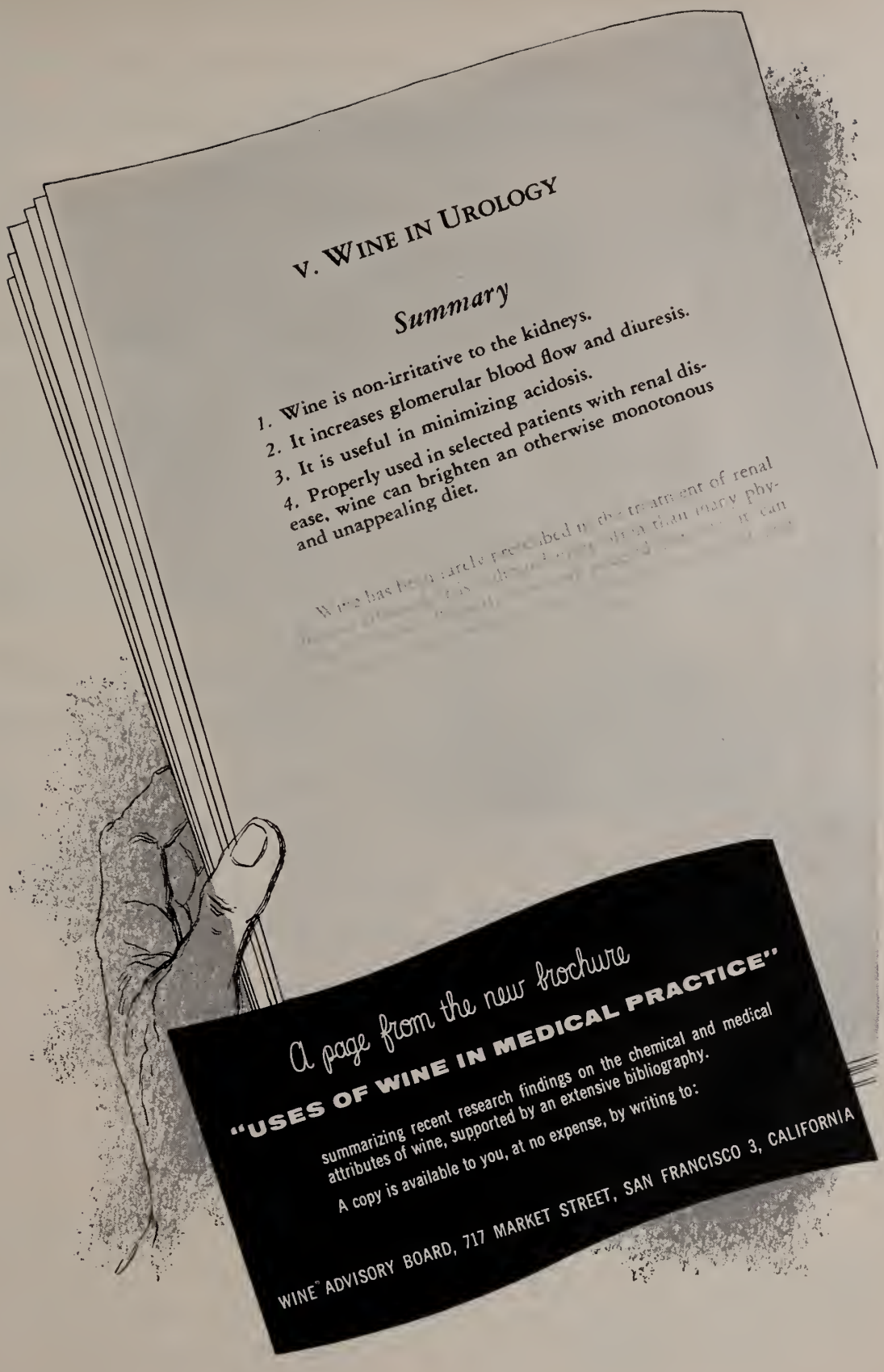
standard for initial control of severe failure MERCUHYDRIN® SODIUM

BRAND OF MERALLURIDE INJECTION



Leadership in diuretic research

Lakeside LABORATORIES, INC., MILWAUKEE 1, WISCONSIN

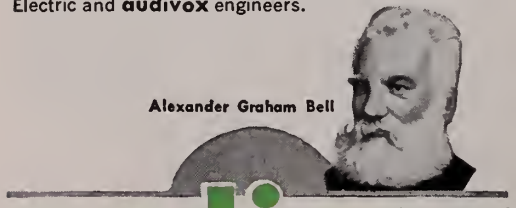

V. WINE IN UROLOGY
Summary
1. Wine is non-irritative to the kidneys.
2. It increases glomerular blood flow and diuresis.
3. It is useful in minimizing acidosis.
4. Properly used in selected patients with renal disease, wine can brighten an otherwise monotonous and unappealing diet.
A page from the new brochure
"USES OF WINE IN MEDICAL PRACTICE"
summarizing recent research findings on the chemical and medical attributes of wine, supported by an extensive bibliography.
A copy is available to you, at no expense, by writing to:
WINE ADVISORY BOARD, 717 MARKET STREET, SAN FRANCISCO 3, CALIFORNIA



pedigree

Only a flawless pedigree — a long and illustrious ancestry of purebreds — can produce a champion show dog.

Only **audivox** in the hearing-aid field can trace an ancestry that includes both Western Electric and Bell Telephone Laboratories. **audivox** lineage springs from the pioneer experiments of Dr. Alexander Graham Bell, furthered by the development of the hearing aid at Bell Telephone Laboratories, brought to fruition by Western Electric and **audivox** engineers.



Alexander Graham Bell

audivox

Successor to *Western Electric* Hearing Aid Division
123 Worcester St., Boston, Mass.



all-transistor
Model 72
by Audivox

new:

audivox presents a versatile new tool in the psychological and somatic management of hearing loss — the Model 72 "New World." Because it departs completely from conventional hearing-aid appearance, this tiny "prosthetic ear" may be worn as a barrette, tie clip, or clasp without concealment. Resultant benefits include new poise and new aural acuity for the wearer through free-field reception without clothing rustle.

MANY DOCTORS rely on career Audivox dealers for conscientious, prompt attention to their patients' hearing needs. There is an Audivox dealer — chosen for his interest, ability, and integrity — in your vicinity. He is listed in the Hearing Aid section of your classified telephone directory, under Audivox or Western Electric.

the pedigreed hearing aid.



NEW VICEROY GIVES SMOKERS

20,000 FILTERS

in every Viceroy Tip

Only Viceroy has this new-type filter. Made of a non-mineral cellulose acetate—it gives the greatest filtering action possible without impairing flavor or impeding the flow of smoke.

Smoke is also filtered through Viceroy's king-size length of rich costly tobaccos. Thus, Viceroy smokers get *double the filtering action* . . . for only a penny or two more than brands without filters.



WORLD'S LARGEST-SELLING FILTER TIP CIGARETTE

New King-Size Filter Tip **VICEROY**

ONLY A PENNY OR TWO MORE THAN CIGARETTES WITHOUT FILTERS



TRI-STATE MEDICAL MEETING

February 21 and 22

HOTEL CHAMBERLIN — OLD POINT COMFORT, VIRGINIA

President—F. E. KREDEL, M.D., Charleston, S. C.
President-Elect—PAUL CAMP, M.D., Richmond, Va.
Secretary-Treasurer—R. B. DAVIS, M.D., Greensboro, N. C.

PROGRAM

Monday, February 21

Surgery of Arteries ..... William H. Muller, M. D.
Surgery of Heart ..... Thomas N. P. Johns, M. D.
Surgery of Hypertension ..... Keith Grimson, M. D.

Intermission

Treatment of Peripheral Vascular Disease ..... E. L. Lowenberg, M. D.
Cancer of the Brain: Newer Methods of Diagnosis and Treatment ..... J. E. Watts, M. D.

Lunch

Glaucoma in Geriatrics ..... Rudolph Thomason, M. D.
Congenital Heart Disease ..... Dale Groom, M. D.
Drug Therapy of Hypertension ..... Herbert G. Langford, M. D.

Intermission

Coronary Disease ..... James L. Camp, III, M. D.
Cardiac Emergencies in General Practice ..... J. L. Hamner, M. D.

Tuesday, February 22

Disease of the Lung ..... Dean B. Cole, M. D.
Diseases of the Humerus ..... Fay A. Carmines, M. D.
The Evaluation of the Sterile Couple ..... Robert A. Ross, M. D.
Geriatric Gynecology ..... Waverly R. Payne, M. D.

Intermission

Clinical Pathological Conference ..... Benjamin Baker, M. D.

Lunch

An Intermediate Hospital Unit for the Care of the Patient with Long Term Illness ..... James Conner, M. D.
Prognosis with Early vs Delayed Diagnosis and Treatment of Diabetes ..... Charles W. Styron, Sr., M. D.
Surgical Lesions of the Spinal Cord Simulating Non Surgical Conditions with a Report of Ten Cases ..... John Meredith, M. D.
Charles Troland, M. D.
The Early Treatment of Severe Full Thickness Burns ..... Herrick Thomas, M. D.
Precocious Pregnancy ..... Charles W. McCants, M. D.

proof of performance shown by proof of preference



Sealy's Accepted Posturepedic Mattress now*

WORLD'S LARGEST SELLING POSTUREPEDIC MATTRESS

To patients suffering from morning backache due to sleeping on an inferior mattress or improperly fitted bedboards, you may suggest the Sealy Posturepedic, with confidence.

*Accepted for advertising in the Journal of the American Medical Association, Sealy's Posturepedic is now the most widely used mattress of its type in the world. Since it is correctly *firm* it insures proper sleeping posture, gives natural support and complete comfort, too. For patients bothered by "low" morning backache, possibly caused by sleeping on a flabby mattress or make-shift bedboard, you may mention the Sealy Posturepedic *knowing* it is giving helpful relief in steadily increasing thousands of cases.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Sealy

SLEEPING ON A SEALY IS LIKE SLEEPING ON A CLOUD

SEALY MATTRESS COMPANY
Railroad Avenue, Bluefield, Va.
8 South Harvie Street, Richmond, Va.

At All

DEPENDABLE

PRESCRIPTION SERVICE

and

SERVICE TO PHYSICIANS

PATTERSON'S
SAFE SERVICE DRUG STORES

Prescription Specialists

Lynchburg, Va. **Martinsville, Va.**
Danville, Va. **Altavista, Va.**
Winston-Salem, N. C.

The State Board of Medical Examiners of Virginia

The next meeting of the Board will be held at the Richmond Hotel, Richmond, Virginia, June 15, 1955, and the examinations will be held at the same hotel June 16 to 18, inclusive. June 1st is the deadline for receipt of applications for the examination and documents and papers to be discussed and acted upon by the Board. The secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

In very special cases
A very superior Brandy



SPECIFY ★ ★ ★

HENNESSY

THE WORLD'S PREFERRED COGNAC BRANDY
84 PROOF Schieffelin & Company, New York, N.Y.

Against staphylococci



This is on actual strain of *staphylococcus aureus*, isolated from a 5-week-old infant. Note extreme sensitivity of the organism to ERYTHROCIN—although it easily resists penicillin and three broad-spectrum antibiotics. This organism may be associated with *sinusitis . . . otitis media . . . tonsillitis . . . abscess . . . bronchopneumonia . . . empyema . . . carbuncle . . . pyoderma . . . bronchiectasis . . . furunculosis . . . pharyngitis . . . septicemia . . .* and *tracheobronchitis.*

for specific therapy against coccic infections...

Wide-range activity against gram-positive pathogens—that's the story of ERYTHROCIN *Filmtab*. As you know, most bacterial respiratory infections are produced by staph-, strep- or pneumococci. *And that is the very range where* ERYTHROCIN *is most effective.* In fact, you'll find it more active against this group of organisms than many other antibiotics.

502087

prescribe

filmtab*

Erythrocin® STEARATE

(ERYTHROMYCIN STEARATE, ABBOTT)

Against common intestinal flora



This sensitivity test shows ERYTHROCIN, penicillin and three broad-spectrum antibiotics against a typical strain of *E. coli*. Note that ERYTHROCIN and penicillin do not affect growth of the organism—*while all three broad-spectrum antibiotics show marked inhibitory action.* Since ERYTHROCIN is inactive against gram-negative organisms, it is less likely to cause alteration in common intestinal flora—with an accompanying low incidence of side effects.

...with little risk of serious side effects

One reason is because the drug acts specifically. It destroys coccic invaders, yet doesn't materially change the normal intestinal flora. Thus, side effects are rarely encountered with ERYTHROCIN. Nor does it cause the allergic reactions occasionally seen with penicillin therapy. Abbott

502087

prescribe

filmtab* **Erythrocin®** STEARATE

(ERYTHROMYCIN STEARATE, ABBOTT)

...from Two Outstanding Cases

RED LABEL • BLACK LABEL

Both 86.8 Proof



Johnnie Walker stands out in its devotion to quality. Every drop is made in Scotland. Every drop is distilled with the skill and care that come from generations of fine whisky-making. And every drop of Johnnie Walker is guarded all the way to give you *perfect* Scotch whisky... the same high quality the world over.



BORN 1820...

STILL GOING STRONG

JOHNNIE WALKER

BLENDED SCOTCH WHISKY

CANADA DRY GINGER ALE, Inc., New York, N. Y., *Sole Importer*



Whenever the diet is faulty, the appetite poor, or the loss of food is excessive

through vomiting or diarrhea—

Valentine's MEAT EXTRACT

stimulates the appetite,

increases the flow of digestive juices,

provides: supplementary amounts of vitamins, minerals and soluble proteins,

extra-dietary vitamin B_{12},

protective quantities of potassium, in a palatable and readily assimilated form.

Supplied in bottles of 2 or 6 fluidounces.

***Dosage** is 1 teaspoonful two or three times daily; two or three times this amount for potassium therapy.*

VALENTINE Company, Inc.

RICHMOND 9, VIRGINIA

Upjohn

Rheumatoid arthritis, rheumatic fever, intractable asthma, allergies . . .

Cortef* *tablets*

Supplied:

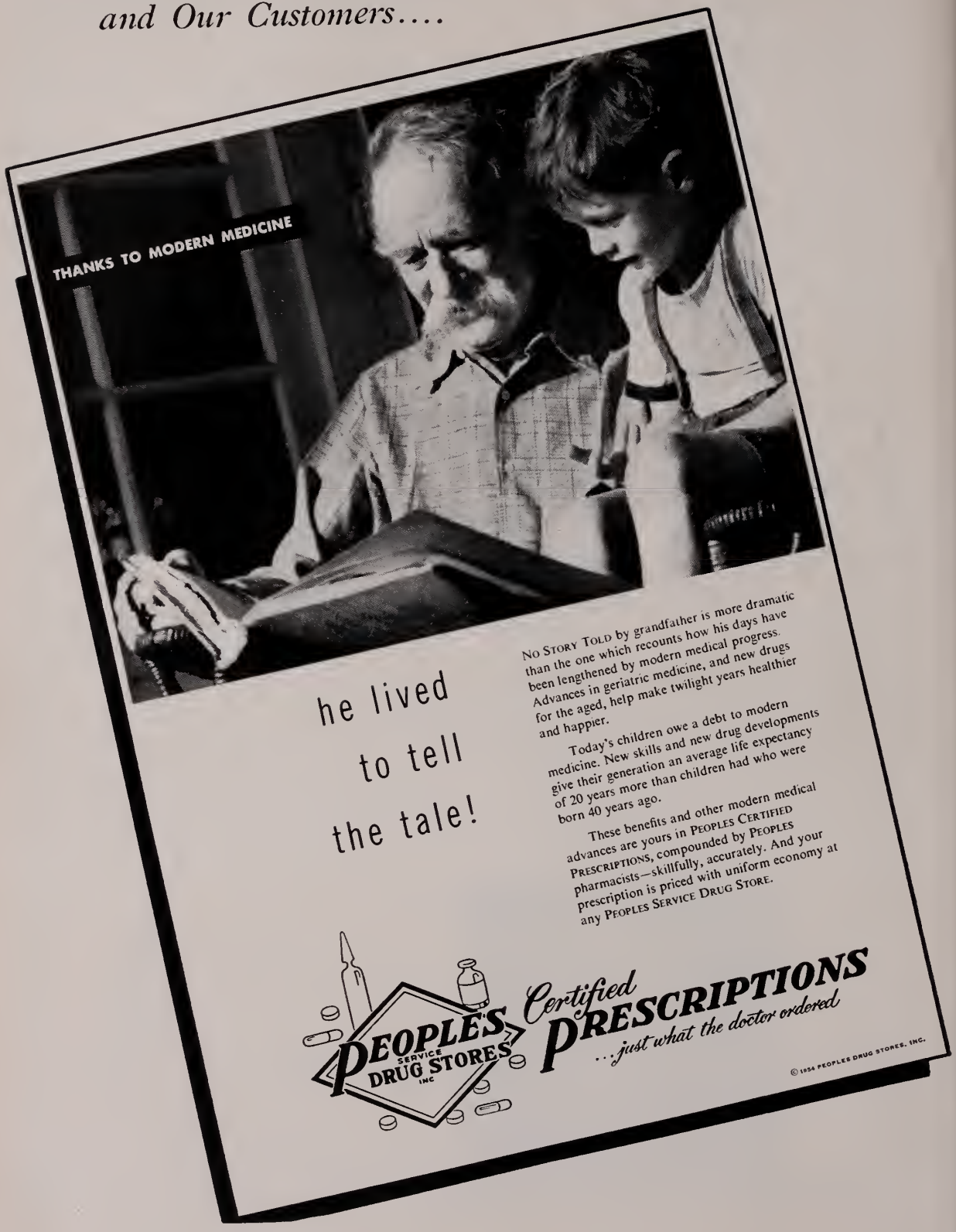
5 mg. tablets in bottles of 50
10 mg. tablets in bottles of 25, 100, 500
20 mg. tablets in bottles of 25, 100, 500

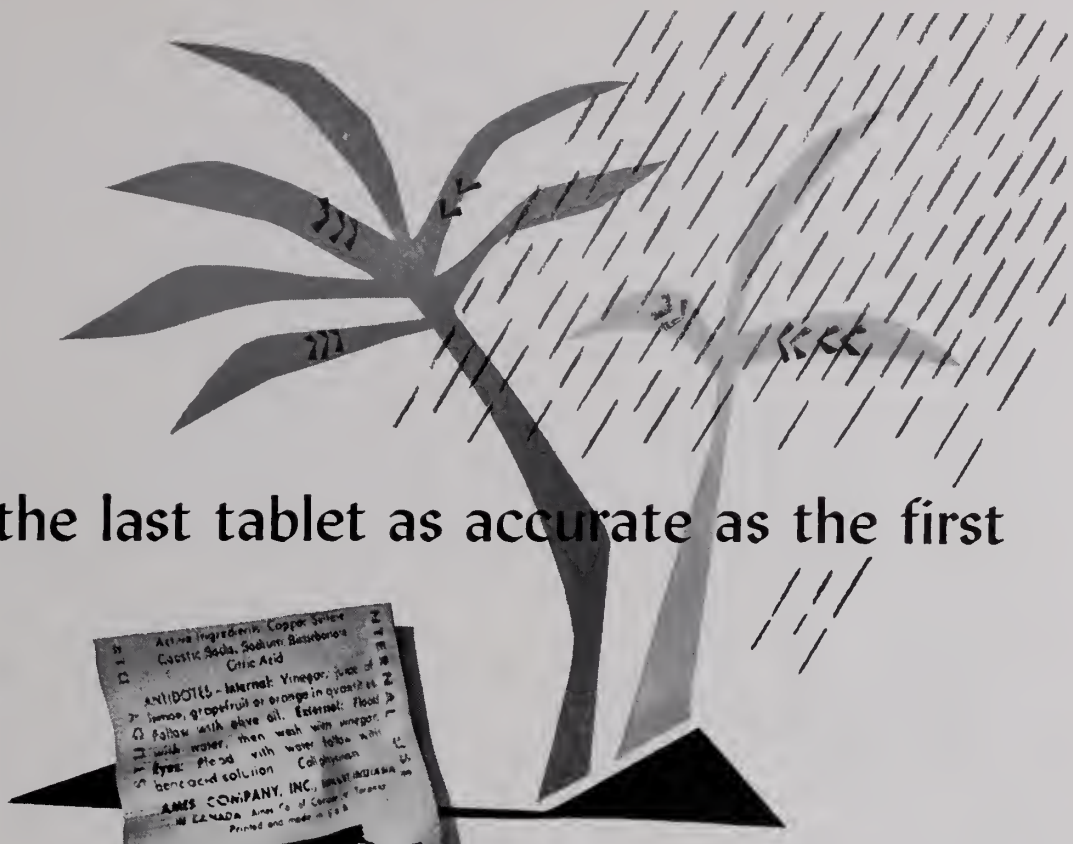
*REGISTERED TRADEMARK FOR THE UPJOHN BRAND OF HYDROCORTISONE (COMPOUND F)

The Upjohn Company, Kalamazoo, Michigan

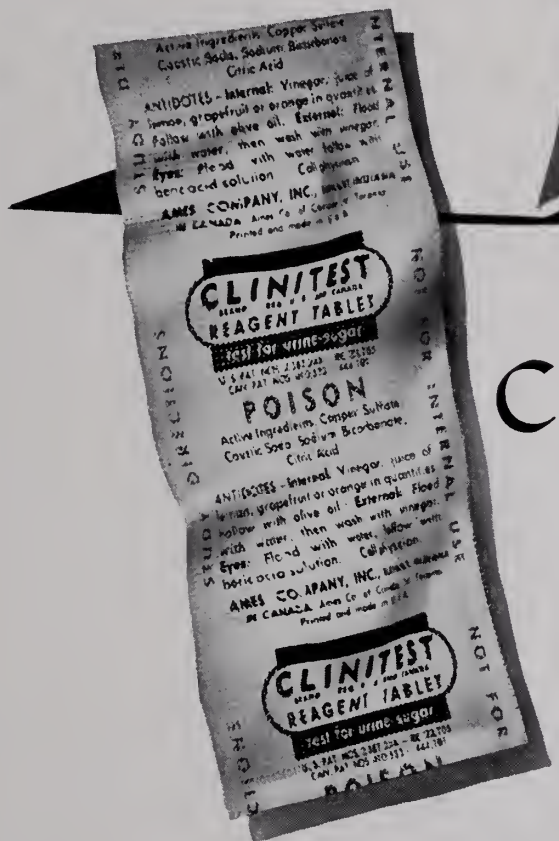


One of a Series of Newspaper Ads. Directed to Your Patients and Our Customers....





the last tablet as accurate as the first



sealed-in-foil

CLINITEST®

BRAND

REAGENT TABLETS

a rapid, reliable urine-sugar test every time because every batch of *Clinitest* Sealed-in-Foil Reagent Tablets is tested for stability under conditions as exacting as a tropical rainy season—86° to 90° temperatures and 95% humidity.

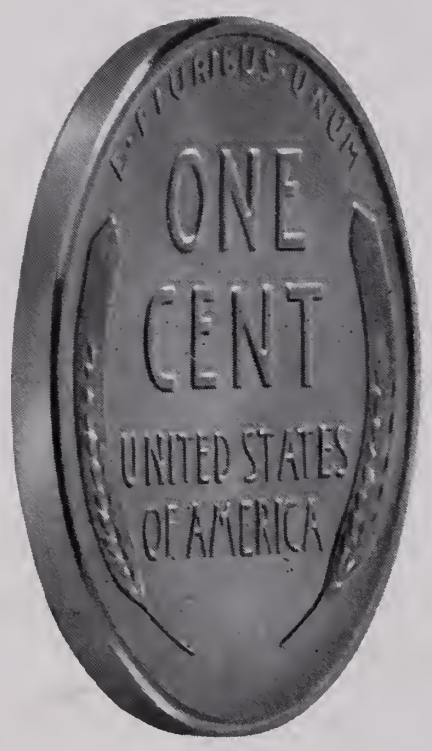
Clinitest Reagent Tablets, Sealed in Foil, boxes of 24 and 500.

AMES DIAGNOSTICS
Adjuncts in Clinical Management

AMES COMPANY, INC • ELKHART, INDIANA
Ames Company of Canada, Ltd., Toronto

62754

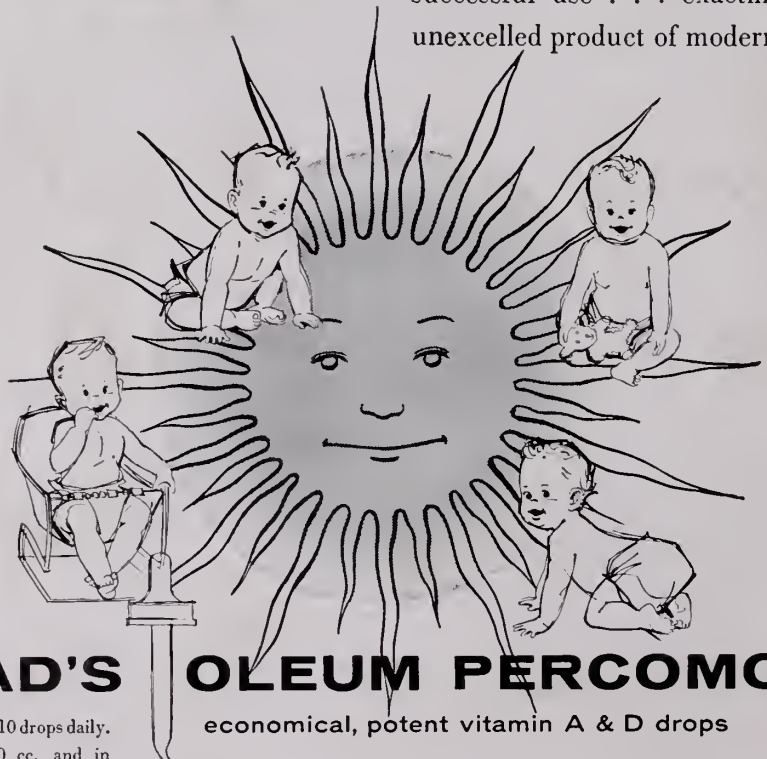
DEPENDABLE PROTECTION COSTS SO LITTLE



No child need be denied protection against rickets and vitamin A and D deficiencies.

Mead's Oleum Percomorphum is a potent, effective source of vitamins A & D . . . that can be given at a cost of about a penny a day.

Specify Mead's Oleum Percomorphum for utmost dependability. It assures your pediatric patients a vitamin preparation with more than 20 years of successful use . . . exactingly assayed . . . an unexcelled product of modern processing.



MEAD'S OLEUM PERCOMORPHUM

economical, potent vitamin A & D drops

Dosage: 5 to 10 drops daily. Available in 10 cc. and in economical 50 cc. bottles.

MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA, U.S.A. MEAD

OFFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

VIRGINIA MEDICAL MONTHLY

Contents

Treatment of Some Common Hematologic Disorders Seen in Practice, John Edgar Stevens . . . 119

A Freeze-Dried Artery Bank, Edward R. Hipp and George R. Minor . . . 125

Speculations on the Common Cold, R. O. Smith . . . 127

Treatment of Snake Venom Poisoning with ACTH and Cortisone, John Thornton Wood, William W. Hoback and Thomas W. Green . . . 130

The Diagnosis of Diabetes, William R. Jordan . . . 136

Destruction of Laryngeal Cartilages by High Voltage, Howard L. Mitchell . . . 138

Pre-Operative Consultations in Organic Voice Disorders, James M. Mullendore . . . 141

(Continued on page 6)

MAR 29 1955
LIBRARY

Easy to give . . . and to take

ILOTYCIN DROPS

(Erythromycin, Lilly) Ethyl Carbonate

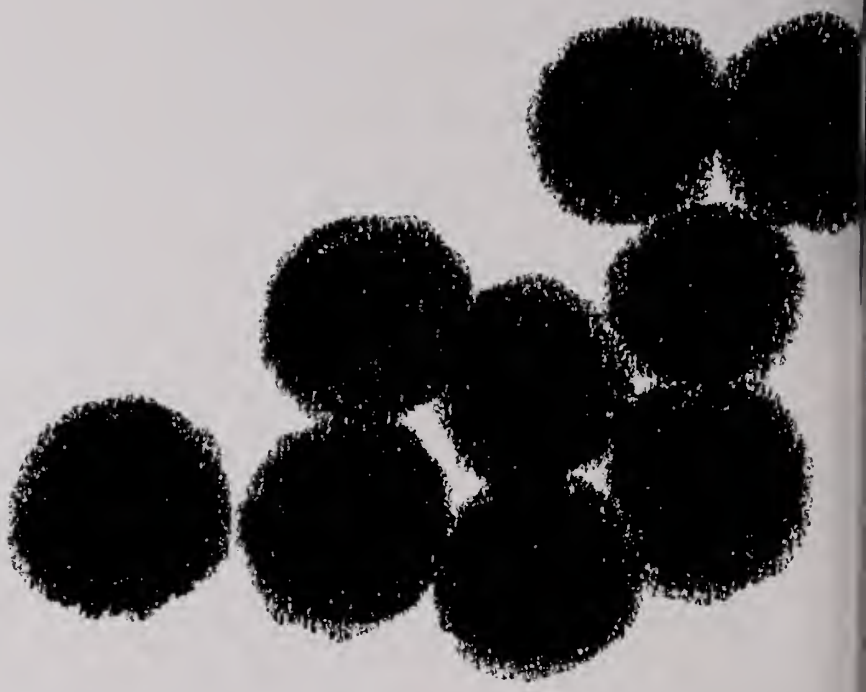
Unexcelled antibiotic spectrum—notably safe

Meets the exacting demands of

Physician—Mother—Baby

Lilly **Another reason to**

consider ILOTYCIN FIRST



to combat resistant bacteria...







Chloromycetin®

The rising incidence of bacterial resistance to various antibiotics constitutes a serious therapeutic problem. Many infections, once readily controlled, are now proving difficult to combat. Administration of CHLOROMYCETIN (chloramphenicol, Parke-Davis) is often useful in these cases because this notable, broad-spectrum antibiotic is frequently effective where other antibiotics fail.

"...An advantage of CHLOROMYCETIN appears to be its relatively low tendency to induce sensitization in the host or resistance among potential pathogens under clinical conditions."*

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

*Pratt, R., & Dufrenoy, J.: Texas Rep. Biol. & Med. *12*:145, 1954.

PARKE, DAVIS & COMPANY • DETROIT 32, MICHIGAN

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April 1874)

Published monthly by The Medical Society of Virginia.

PUBLICATION COMMITTEE

Lewis H. Bosher, Jr., M.D., *Chairman and Editor*
Wyndham B. Blanton, M.D. Lloyd B. Burk, M.D.
with
EDITORIAL BOARD
J. Morrison Hutcheson, M.D.
Cato Drash, M.D.
Ennion S. Williams, M.D.
A. Brownley Hodges, M.D.
Hugh H. Trout, Jr., M.D.

The MONTHLY is not responsible for the opinions and statements of its contributors.

All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

Managing Editor—E. SPENCER WATKINS
1105 West Franklin Street, Richmond 20.

Annual Subscription—$2.00 Single Copies—25¢

Entered as Second Class Matter at the Postoffice, Richmond, Virginia, under the Act of March 3, 1879.

THE MEDICAL SOCIETY OF VIRGINIA

OFFICERS

President—CARRINGTON WILLIAMS, M.D., Richmond

President-Elect—JAMES P. KING, M.D., Radford

Vice-Presidents—JAMES W. LOVE, M.D., Alexandria
WAVERLY R. PAYNE, M.D., Newport News
BENJAMIN W. RAWLES, JR., M.D., Richmond

Executive Secretary-Treasurer—ROBERT I. HOWARD, Richmond

Councilors—A. A. CREECY, M.D., Newport News
WALTER P. ADAMS, M.D., Norfolk
GUY W. HORSLEY, M.D., Richmond
W. J. OZLIN, M.D., South Hill
L. P. BAILEY, M.D., Nathalie
FRANK A. FARMER, M.D., Roanoke
H. W. MILLER, M.D., Woodstock
McLEMORE BIRDSONG, M.D., Charlottesville
JAMES P. WILLIAMS, M.D., Richlands
HARRY C. BATES, JR., M.D., Arlington

Delegates to A.M.A.
J. M. HUTCHESON, M.D., Richmond
VINCENT W. ARCHER, M.D., Charlottesville

Alternate Delegates to A.M.A.
ALLEN BARKER, M.D., Roanoke
W. LINWOOD BALL, M.D., Richmond

Executive Office—1105 W. Franklin St., Richmond 20.

INDEX TO ADVERTISERS

Abbott 10-11
American Meat Institute 41
Appalachian Hall 30
Audivox 17
Bayer Company Division, The 43
Burroughs Wellcome & Co. 8, 9
Component and Other Medical Societies in Virginia 46
Davies, Rose & Co., Ltd. 8
First and Merchants National Bank of Richmond 40
Foot-so-Part Company 18
Garst Bros. Dairy Inc. 37
Geigy Pharmaceuticals 49
Gill Memorial Eye, Ear and Throat Hospital 35
Jaguar 24
Jefferson, A. G. 16
Johnston-Willis Hospital 30
Keleket X-ray Corporation 22
Knox Gelatine Co. 16
Lakeside Laboratories, Inc. 15
Lederle Laboratories Division 6, 20-21
Lilly and Company Eli 5, 26
McGuire Clinic—St. Luke's Hospital 32
Mead Johnson & Company 50
Medical Society of Virginia, The 4, 6, 37
Parke, Davis & Company 2-3
Patterson's Safe Service Drug Stores 18
People's Service Drug Stores, Inc. 19
Plyler's Nursing Home, Mrs. 36
Premarin 40
Louise C. Godwin Nursing Home, Inc., The 37
Medical College of Virginia 30
New York Polyclinic Medical School and Hospital, The 37
Richmond Eye Hospital—Richmond Ear, Nose and Throat Hospital 36
Richmond Hotels Incorporated 40
Riverside Convalescent Home 28
Riverside Hospital 35
Saint Albans Sanatorium 29
Schering 25
Sealy Mattress Company 16
Searle & Co., G. D. 27
Squibb 12
State Board of Medical Examiners of Virginia, The 6
St. Elizabeth's Hospital 34
Stuart Circle Hospital 34
Terrace Hill Nursing Home, Inc. 32
Thompson Homestead School, The 6
Tucker Hospital Inc. 29
United States Brewers Foundation 48
Upjohn 7, 13, 23, 33, 39, 47
U. S. Savings Bonds 42
Valentine Company, Inc. 9
Viceroy Cigarettes 14
Virginia Bakers Council, The 44
Virginia Medical Monthly 4
Westbrook Sanatorium 28
White Cross Hospital 31
Williams Printing Co. 18
Winthrop, Stearns, Inc. 38
Wyeth 45

THE

NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

invites you to attend a closed circuit,
live television program

Progress Report to Physicians on Immunization Against Poliomyelitis

especially arranged to acquaint physicians quickly with current poliomyelitis research which will be of particular professional and public interest in 1955.

Up-to-the-minute report on the status of poliomyelitis vaccine, and other information such as schedule of administration and incidence of side reactions, will be presented by leaders in the development and evaluation of the vaccine.

Information also will be presented on techniques of preparation of poliomyelitis vaccine and on its probable availability during 1955.

Attendance will be limited to physicians. Your ticket of admission and a preview of the program will reach you by mail; watch for them.

Progress Report to Physicians on Immunization Against Poliomyelitis is being produced through the cooperation of

ELI LILLY AND COMPANY, INDIANAPOLIS 6, INDIANA, U.S.A.



Lederle

For the modification of measles and the prevention or attenuation of infectious hepatitis and poliomyelitis.

LEDERLE LABORATORIES DIVISION
AMERICAN Cyanamid COMPANY Pearl River, New York

Every Virginia Doctor Should Have These Books!

The history of medicine in the Old Commonwealth from Jamestown to the beginning of the present century is a work every doctor should be proud to own. Complete and intensely interesting.

Medicine In Virginia

In 3 Volumes
Published under Auspices of
Medical Society of Virginia

Reduced price to members of the Medical Society of Virginia

3 Volumes for $5.75
(formerly $9.75)

Order through
Medical Society of Virginia
1105 West Franklin Street
Richmond, Virginia

The . . . Thompson Homestead School

FOR EXCEPTIONAL CHILDREN

Year round private home and school for infants, children and adults on pleasant 250 acre farm near Charlottesville.

Write for booklet.

MRS. J. BASCOM THOMPSON, *Principal*

FREE UNION **VIRGINIA**

The State Board of Medical Examiners of Virginia

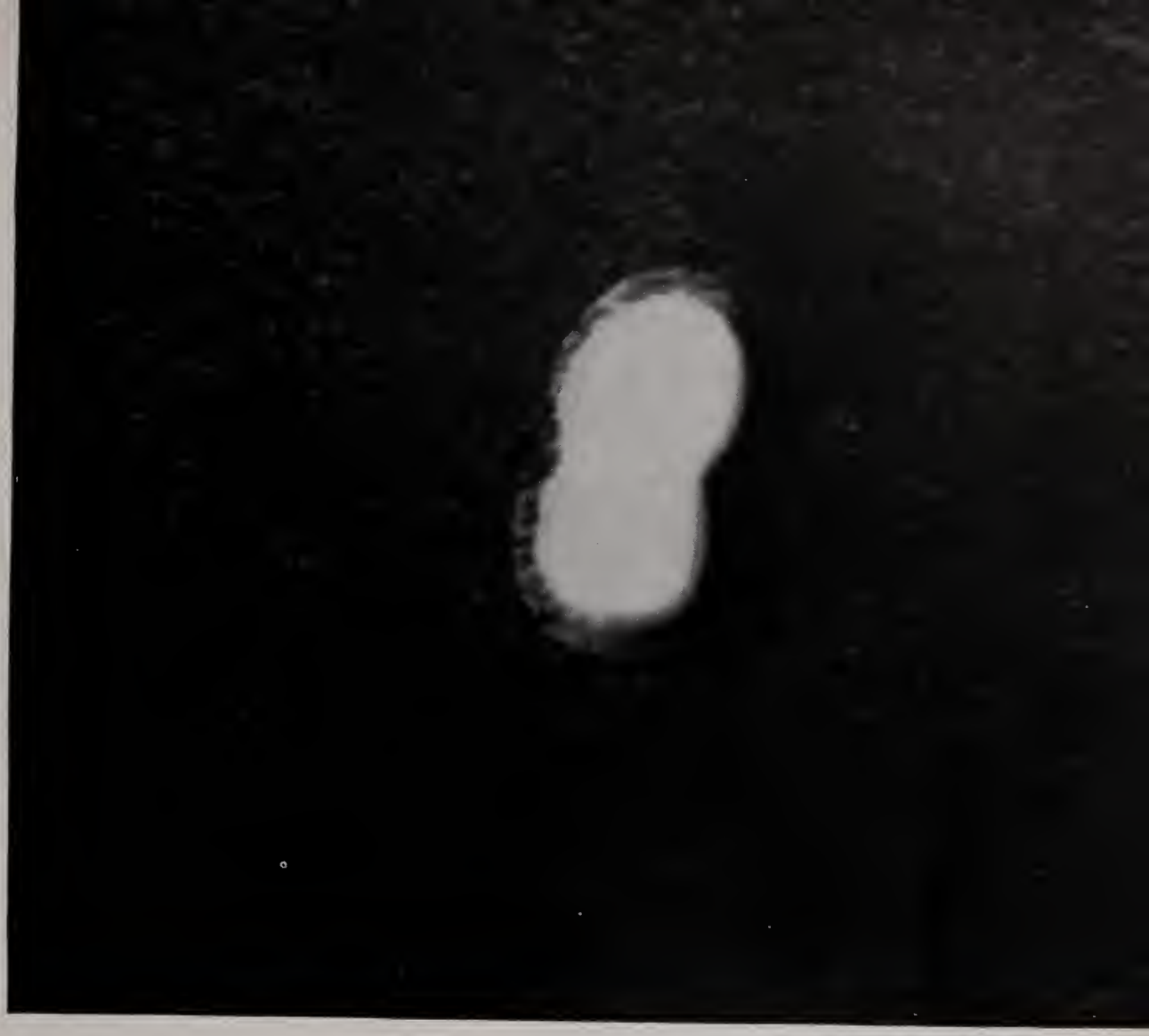
The next meeting of the Board will be held at the Richmond Hotel, Richmond, Virginia, June 15, 1955, and the examinations will be held at the same hotel June 16 to 18, inclusive. June 1st is the deadline for receipt of applications for the examination and documents and papers to be discussed and acted upon by the Board. The secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

CONTENTS
(Continued)

The Medical Society of Virginia	144
Medico-Legal Notes	146
Notes on Pulmonary Tuberculosis	147
Mental Health	150
Public Health	153
Woman's Auxiliary	155
President's Message	157
Editorial	158
Society Proceedings	162
News	163
Obituaries	166

INDEX TO ADVERTISERS—Page 4

Entered as Second Class Matter at the Postoffice, Richmond, Va



ELECTRON PHOTOMICROGRAPH

Diplococcus pneumoniae 44,000 X

Diplococcus pneumoniae (Streptococcus pneumoniae) is a Gram-positive organism commonly involved in

lobar—and bronchopneumonia • chronic bronchitis • mastoiditis • sinusitis otitis media • and meningitis.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

*TRADEMARK, REG. U. S. PAT. OFF.

Upjohn

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.



Whenever the diet is faulty, the appetite poor, or the loss of food is excessive

through vomiting or diarrhea—

Valentine's
MEAT EXTRACT

stimulates the appetite,

increases the flow of digestive juices,

provides: supplementary amounts of vitamins, minerals and soluble proteins,

extra-dietary vitamin B_{12},

protective quantities of potassium, in a palatable and readily assimilated form.

Supplied in bottles of 2 or 6 fluidounces.

***Dosage** is 1 teaspoonful two or three times daily; two or three times this amount for potassium therapy.*

VALENTINE Company, Inc.
RICHMOND 9, VIRGINIA

Results With

'ANTEPAR'®*

against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

against staphylococci



This is an actual strain of *Stophylococcus aureus*, isolated from a five-week-old infant. Note extreme sensitivity of the organism to ERYTHROCIN—although it easily resists the four other antibiotics. This organism may be associated with *sinusitis* . . . *otitis media* . . . *tonsillitis* . . . *obscess* . . . *bronchopneumonia* . . . *empyema* . . . *carbuncle* . . . *pyoderma* . . . *bronchiectasis* . . . *furunculosis* . . . *phoryngitis* . . . *septicemia* . . . and *tracheobronchitis*.

for specific therapy against coccic infections...

Wide range activity against gram-positive pathogens—that's the story of ERYTHROCIN *Filmtab**. As you know, most bacterial respiratory infections are produced by staph-, strep- or pneumococci. *And that is the very range where* ERYTHROCIN *is most effective.* In fact, you'll find it more active against this group of organisms than many other antibiotics.

filmtab*

Erythrocin® STEARATE

(ERYTHROMYCIN STEARATE ABBOTT)

against common intestinal flora



This sensitivity test shows ERYTHROCIN and the same antibiotics against a typical strain of *E. coli*. Note that ERYTHROCIN and penicillin do not affect growth of the organism—while the other antibiotics show marked inhibitory action. Since ERYTHROCIN is inactive against gram-negative organisms, it is less likely to cause alteration in common intestinal flora—with an accompanying low incidence of side effects.

...with little risk of serious side effects

One reason is because the drug acts specifically. It destroys coccic invaders, yet doesn't materially change the normal intestinal flora. Thus, side effects are rarely encountered with ERYTHROCIN. Nor does it cause the allergic reactions occasionally seen with penicillin. Abbott

filmtab*

Erythrocin® STEARATE

(ERYTHROMYCIN STEARATE ABBOTT)

*TM FOR ABBOTT'S FILM SCALED TABLETS, PAT. APPLIED FOR

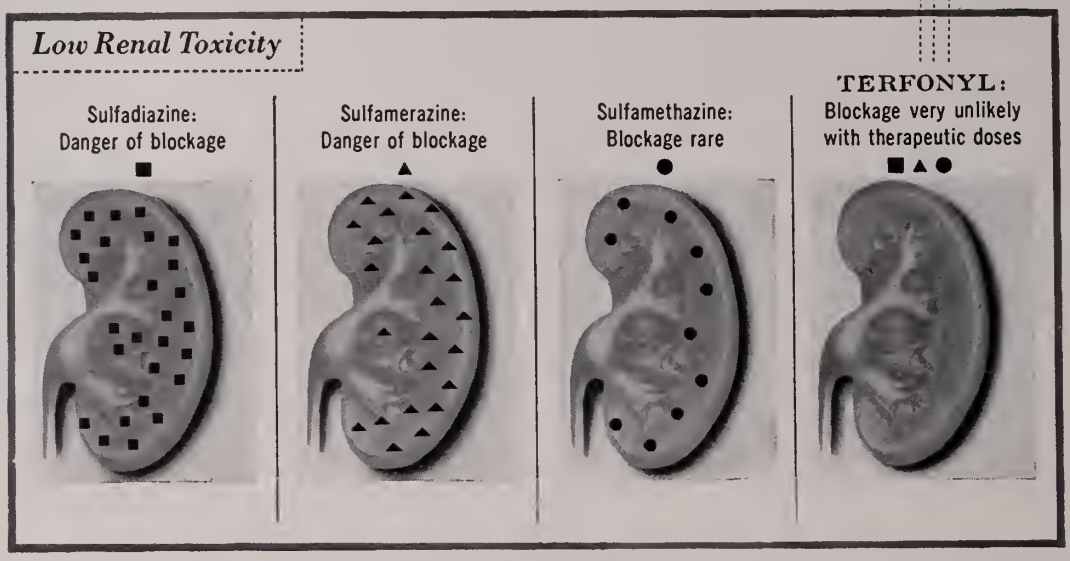
503111

TERFONYL

Sulfadiazine
Sulfamerazine
Sulfamethazine

FOR SAFER SULFONAMIDE THERAPY....

Low Renal Toxicity



With usual doses of Terfonyl the danger of kidney blockage is virtually eliminated Each of the three components is dissolved in body fluids and excreted by the kidneys *as though it were present alone.* The solubility of Terfonyl is an important safety factor.

Terfonyl contains equal parts of sulfadiazine, sulfamerazine and sulfamethazine, chosen for their high effectiveness and low toxicity.

Terfonyl Tablets 0.5 Gm. Bottles of 100 and 1000

Terfonyl Suspension, 0.5 Gm. per 5 cc.
Appetizing raspberry flavor • Pint bottles

SQUIBB A NAME YOU CAN TRUST

'TERFONYL' IS A SQUIBB TRADEMARK



ELECTRON PHOTOMICROGRAPH

Hemophilus influenzae 64,000 X

Hemophilus influenzae ("influenza bacillus") is a Gram-negative organism which grows only in the presence of hemoglobin. Contrary to its name, it is not the causative agent in influenza, but rather is commonly involved in

meningitis • chronic bronchitis • bronchiolitis
tracheobronchitis • supraglottic laryngitis • bronchopneumonia

It is another of the more than 30 organisms susceptible to

PANMYCIN* HCl

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

*TRADEMARK, REG. U.S. PAT. OFF.

Upjohn



DOCTOR, here's a question and an answer you may find useful when patients ask about cigarettes:

What do Viceroys do for you that no other filter tip can do?



These filter traps, doctor, are composed of a pure white non-mineral cellulose acetate. They provide maximum filtering efficiency without affecting the flow of the smoke.

And, in addition, they enhance the flavor of Viceroy's quality tobaccos to such a degree that smokers report they taste even better than cigarettes without filters.



King-Size Filter Tip **VICEROY**

WORLD'S MOST POPULAR FILTER TIP CIGARETTE

ONLY A PENNY OR TWO MORE THAN CIGARETTES WITHOUT FILTERS



know your diuretic

will your cardiac patients be able to continue the diuretic you prescribe

?

uninterrupted therapy is the key factor in diuretic control of congestive failure. You can prescribe NEOHYDRIN every day, seven days a week, as needed.

TABLET

NEOHYDRIN®

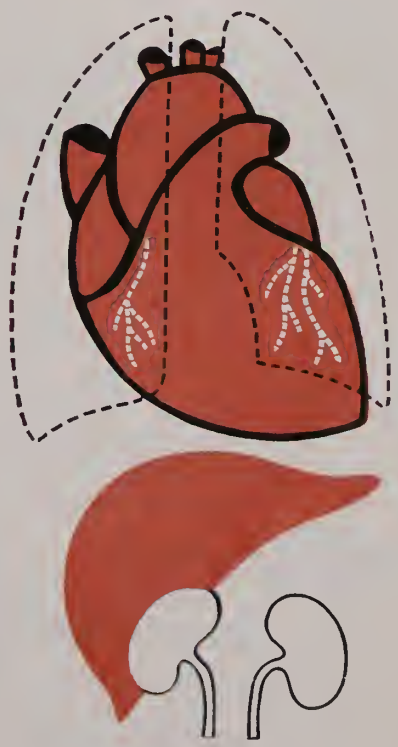
BRAND OF CHLORMERODRIN

(18.3 MG. OF 3-CHLOROMERCURI-2-METHOXY-PROPYLUREA IN EACH TABLET)

no "rest" periods... no refractoriness

acts only in kidney...

no unwanted enzyme inhibition in other parts of the body.



standard for initial control of severe failure MERCUHYDRIN® SODIUM

BRAND OF MERALLURIDE INJECTION

Leadership in diuretic research

Lakeside LABORATORIES, INC., MILWAUKEE 1, WISCONSIN

proof of performance shown by proof of preference



Sealy's Accepted Posturepedic Mattress now*

WORLD'S LARGEST SELLING POSTUREPEDIC MATTRESS

To patients suffering from morning backache due to sleeping on an inferior mattress or improperly fitted bedboards, you may suggest the Sealy Posturepedic, with confidence.

*Accepted for advertising in the Journal of the American Medical Association, Sealy's Posturepedic is now the most widely used mattress of its type in the world. Since it is correctly *firm* it insures proper sleeping posture, gives natural support and complete comfort, too. For patients bothered by "low" morning backache, possibly caused by sleeping on a flabby mattress or make-shift bedboard, you may mention the Sealy Posturepedic *knowing* it is giving helpful relief in steadily increasing thousands of cases.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Sealy

SLEEPING ON A SEALY IS LIKE SLEEPING ON A CLOUD

SEALY MATTRESS COMPANY
Railroad Avenue, Bluefield, Va.
8 South Harvie Street, Richmond, Va.

KNOX GELATINE IS ALL PROTEIN

KNOX GELATINE DRINK (directions in every package) is the easy to take, low cost protein supplement. Non-allergenic, no sugar, **KNOX GELATINE** recommended by physicians for 65 years.

WRITE KNOX GELATINE
FREE BOOKLET "Newer Knowledge in Proteins"
Knox Gelatine Co., Johnstown, N. Y., Dept. **VS-3**

For the
Discriminating
Eye Physician

Depend on the Services of a Guild Optician

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

in
Lynchburg, Virginia

A. G. JEFFERSON
Ground Floor **Allied Arts Bldg.**

Exlusively Optical



blueblood

Only a long and distinguished ancestry of champions can produce a feline blueblood.

Only **audivox** in the hearing-aid field can trace an ancestry that includes both Western Electric and Bell Telephone Laboratories. **audivox** lineage springs from the pioneer experiments of Dr. Alexander Graham Bell, furthered by the development of the hearing aid at Bell Telephone Laboratories, brought to fruition by Western Electric and **audivox** engineers.



Alexander Graham Bell

audivox

Successor to *Western Electric* Hearing Aid Division
123 Worcester St., Boston, Mass.



all-transistor Model 72 by Audivox

new:

audivox presents a versatile new tool in the psychological and somatic management of hearing loss — the Model 72 "New World." Because it departs completely from conventional hearing-aid appearance, this tiny "prosthetic ear" may be worn as a barrette, tie clip, or clasp without concealment. Resultant benefits include new poise and new aural acuity for the wearer through free-field reception without clothing rustle.

MANY DOCTORS rely on career Audivox dealers for conscientious, prompt attention to their patients' hearing needs. There is an Audivox dealer — chosen for his interest, ability, and integrity — in your vicinity. He is listed in the Hearing Aid section of your classified telephone directory, under Audivox or Western Electric.

the blueblood of hearing aids

Foot-so-Port Shoe Construction and its Relation to Center Line of Body Weight



1. The highest percent of sizes in the shoe business are sold in Foot-so-Port shoes to the big men and women who have found that Foot-so-Port canstruction is the strongest, because . . . . . .

- The patented arch suppart construction is guaranteed nat to break down.
- Special heels are langer than most anatamic heels ond maintain the appearance of narmal shaes.
- Insole extension and wedge at inner carner of the heel where suppart is mast needed.
- Innersoles are guaranteed not to crack, curl, ar collapse. Insulated by a special layer af Texan which also cushions firmly and uniformly.

2. Foot-so-Port lasts were designed and the shoe construction engineered with the assistance of many top orthapedic doctors. We invite the members of the medical profession to wear a pair — prove to yaurself these statements.

3. We make more pairs of custom shaes for polio feet and all types of abnormal feet than any other manufacturer.

FOOT-SO-PORT SHOES for Men and Women

There is a **FOOT-SO-PORT** agency in all leading towns and cities. Refer to your Classified Directory

Foot-so-Port Shoe Compony, Oconomowoc, Wis.

At All

DEPENDABLE

PRESCRIPTION SERVICE

and

SERVICE TO PHYSICIANS

PATTERSON'S

SAFE SERVICE DRUG STORES

Prescription Specialists

Lynchburg, Va. **Martinsville, Va.**

Danville, Va. **Altavista, Va.**

Winston-Salem, N. C.

Complete Printing and Binding Service

Commercial, Book and Job Work, Catalogues—Publications
Advertising Literature, Booklets—Broadsides
Office and Factory Forms
Loose-Leaf and Manifold Forms—Ledger Leaves and Loose-Leaf Binders
Paper Ruling
Complete Binding Equipment

Complete Service Under One Roof

Acquaint us with your requirements. We serve you efficiently and economically.

Dial 3-1881

WILLIAMS PRINTING CO.

11-13-15 North Fourteenth Street **RICHMOND, VIRGINIA**

One of a Series of Newspaper Ads. Directed to Your Patients and Our Customers....




ACH



ACHROMYCIN has proved effective against:

Pharyngitis
Acute Bronchitis
Tonsillitis
Pertussis
Otitis Media
Scarlet Fever
Osteomyelitis
Epidermal Abscesses
Acute Brucellosis
Pancreatic Fibrosis
Typhus Fever
Sinusitis
Gonorrhea
Bacillary Dysentery
Pneumonia with or without Bacteremia
Bronchopulmonary Infection
Acute Pyelonephritis
Chronic Pyelonephritis
Mixed Bacterial Infections
Soft Tissue Infections
Staphylococcal Septicemia
Pneumonoccal Septicemia
Urogenital Tract Infections
Acute Extraintestinal Amebic Infections
Intestinal Amebic Infections
Subacute Bacterial Endocarditis

ROMYCIN*

HYDROCHLORIDE
Tetracycline HCl *Lederle*

A TRULY BROAD-SPECTRUM ANTIBIOTIC

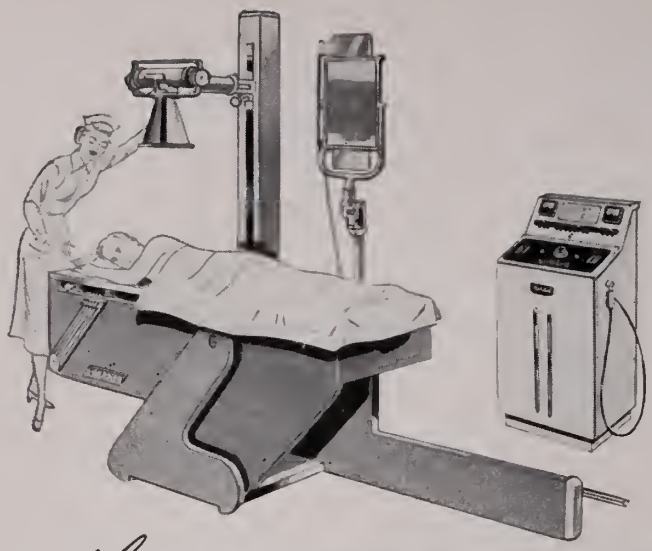
Clinical research has proved ACHROMYCIN to be effective against more than a score of different infections, including those caused by Gram-positive and Gram-negative bacteria, rickettsia, certain viruses and protozoa.

In addition to its true broad-spectrum activity, ACHROMYCIN provides more rapid diffusion than certain other antibiotics, prompt control of infection, and the distinct advantage of being well tolerated by most persons, young and old alike.

ACHROMYCIN, in its many forms, was accepted by the medical profession in an amazingly short time. Each day more and more prescriptions for ACHROMYCIN are being written when a broad-spectrum antibiotic is indicated.

Lederle LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* Pearl River, New York

*REG. U.S. PAT. OFF.



Kelley-Koett
The Oldest Name
in X-ray

designed
especially
for you,
Doctor

the new **KELESCOPE**
combination...

FULL SIZE...
AUTOMATIC...
SAFE...
Radiography • Fluoroscopy

100 MA at 100 KV
Full Wave Rectified

DESIGNED BY KELEKET ESPECIALLY FOR MAXIMUM ECONOMY

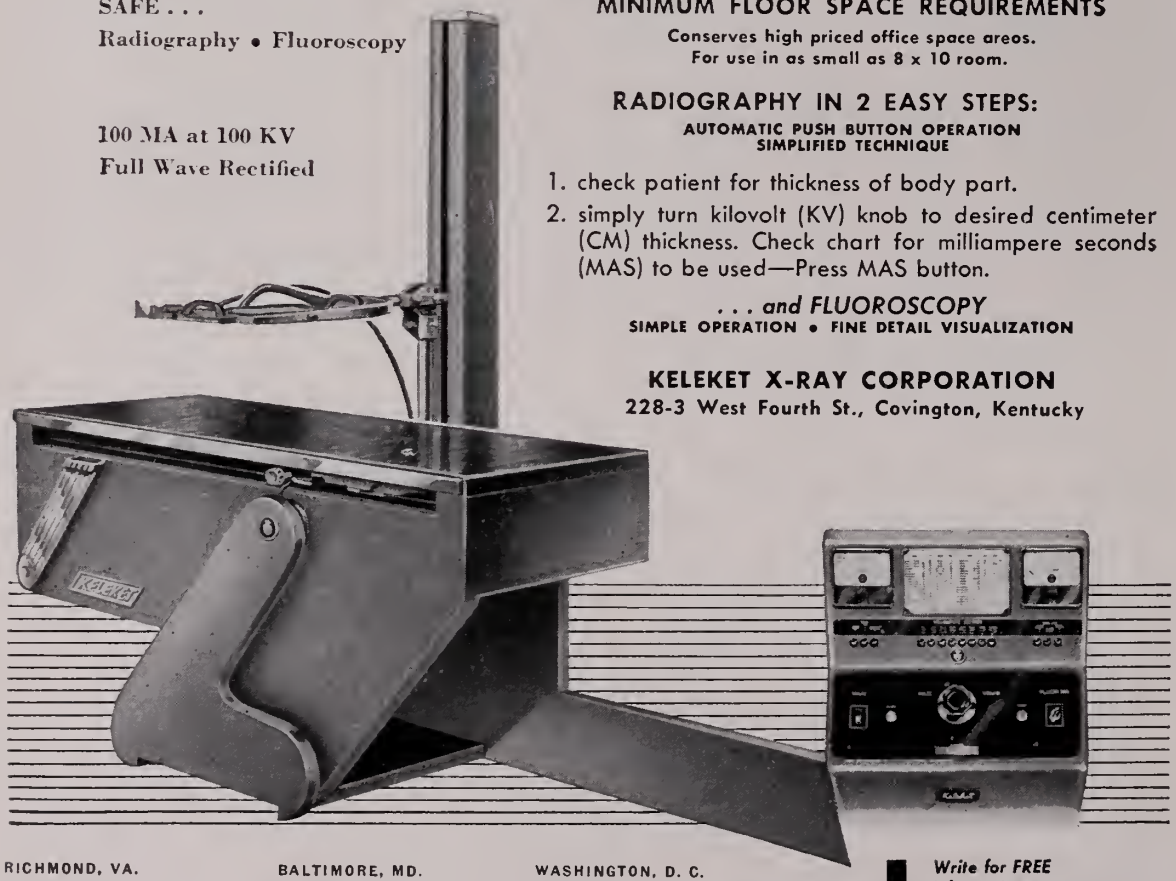
MINIMUM FLOOR SPACE REQUIREMENTS
Conserves high priced office space areas.
For use in as small as 8 x 10 room.

RADIOGRAPHY IN 2 EASY STEPS:
AUTOMATIC PUSH BUTTON OPERATION
SIMPLIFIED TECHNIQUE

1. check patient for thickness of body part.
2. simply turn kilovolt (KV) knob to desired centimeter (CM) thickness. Check chart for milliampere seconds (MAS) to be used—Press MAS button.

... and FLUOROSCOPY
SIMPLE OPERATION • FINE DETAIL VISUALIZATION

KELEKET X-RAY CORPORATION
228-3 West Fourth St., Covington, Kentucky



RICHMOND, VA.
1303 Summit Ave.
Tel. 84-4526

BALTIMORE, MD.
301 E. Chase St.
Plaza 2-5222

WASHINGTON, D. C.
107-9 Tower Bldg.
1041 "K" St., N.W. Nat'l 4049

Write for FREE Informative Literature today!



ELECTRON PHOTOMICROGRAPH

Aerobacter aerogenes 42,000 X

Aerobacter aerogenes (Bacillus lactis aerogenes) is a methyl red-negative, gas-forming organism which, although found in the normal intestine, is commonly involved in urinary tract infections and peritonitis.

It is another of the more than 30 organisms susceptible to

PANMYCIN* HCl

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U. S. PAT. OFF.

The very attributes that make Jaguar the world's foremost sports car make it particularly suitable to *your* exacting profession.

The speed that brought Jaguar home a winner in over 46 major races . . . for your emergency calls. Maneuverability . . . that weaves you through the worst traffic. Oversize racing brakes . . . for quick stops and safety under all conditions. Dependability . . . so necessary in your active practice.

For instance, a Jaguar hard top coupe was driven 7 continuous days and nights . . . 16,851 non-stop miles . . at an average speed of over 100 m.p.h. Yet after this grueling test, technicians found it would have passed new car inspection!

just what the doctor ordered!

The new Jaguar coupe . . . with its quiet good looks, world renowned XK-140 engine and very much enlarged space behind the front seat . . . is truly Rx for *you!* Arrange for a demonstration today!



XK-140 Super Sports Coupe . .
$3795
Port of Entry,
White walls extra.

JAGUAR

the finest car of its class in the world

HARPER MOTORS, INC.
901 Preston Avenue
CHARLOTTESVILLE, VA.
Tel. 28191

FOREIGN CAR DIST. INC.
806 Granby Street
NORFOLK, VA.
Tel. 40663

TRANS-PORT SALES & SERVICE, INC.
1010 N. Boulevard
RICHMOND, VA.
Tel. 51775

IMPERIAL MOTORS OF FAIRF
Route 29
Nr. FALLS CHURCH, VA.
Tel. Jefferson 43302

IMPERIAL CAR DISTRIBUTORS, INC., Academy and Washington, HAMPTON, VA. Tel. 4383

make your

allergy Rx

taste better

Chlor-Trimeton syrup q.s. ad

• taste appeals to young and old

• compatible with commonly prescribed medications

Contains CHLOR-*TRIMETON*® Maleate

(brand of chlorprophenpyridamine maleate), 2 mg. per teaspoonful (4 cc.).

Schering

CHLOR-*TRIMETON* SYRUP

SCHERING



Most acute bacterial respiratory infections you encounter respond readily to 'Ilotycin.'

'Ilotycin' kills susceptible pathogens of the respiratory tract. Therefore, the response is decisive and quick. Bacterial complications such as otitis media, chronic tonsillitis, and pyelitis are less likely to occur.

Most pathogens of the respiratory tract are rapidly destroyed. Yet, because the coliform bacilli are highly insensitive, the bacterial balance of the intestine is seldom disturbed.

'Ilotycin' is notably safe and well tolerated. Urticaria, hives, and anaphylactic reactions have not been reported in the literature.

Staphylococcus enteritis, avitaminosis, and moniliasis have not been encountered.

Gastro-intestinal hypermotility is not observed in bed patients and is seen in only a small percentage of ambulant patients.

Available as specially coated tablets and pediatric suspensions.

Lilly

QUALITY / RESEARCH / INTEGRITY

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U.S.A.

The Virginia
MEDICAL
MONTHLY

March, 1955
Vol. 82, No. 3
Whole No. 1233

Treatment of Some Common Hematologic Disorders Seen in Practice

JOHN EDGAR STEVENS, M.D.
Richmond, Virginia

THE purpose of this paper is to present to the physician in general practice some of the methods of treatment available of the more commonly encountered blood and related diseases. It is not a complete review of either all means of therapy or of all the diseases. However, it is hoped that it will be of practical value in the management of some of the problems encountered.

Leukemia and Malignant Lymphoma[3,12]

The publicity which has attended the effects of atomic bomb explosions has brought the toxic effects of irradiation to the fore.[10] Data obtained from the Japanese cities of Hiroshima and Nagasaki revealed an increased incidence to leukemia in the population exposed as compared with the non-exposed population of two other cities.[7] Likewise, an increased incidence of the disease has been noted in radiologists and other physicians using fluoroscopy routinely.[19] The general population, too, has shown an increased incidence. With this increase in incidence, it is only natural that there should follow apace many forms of therapy that are available.

Because some agents which are used for leukemia are likewise used for malignant lymphoma, these disease groups will be discussed together. Therapeutic measures other than palliative are mainly three: (1) chemotherapeutic agents, (2) irradiation, and (3) surgery.

In using chemotherapeutic agents, one is constantly striving to replace a toxic agent with one less toxic —but still effective! As an author[24] humorously put it, "the problem of finding an effective agent for treatment of leukemia and lymphoma is almost—not quite, but almost—as hard as finding some agent that will dissolve away the left ear, say, yet leave the right ear unharmed; so slight is the difference between the cancer cell and its normal ancestor."

Nitrogen Mustard—The chemical names for two such agents are: Methyl-bis (betachloroethyl) amine hydrochloride is the preparation most frequently used, and a newer one called 1,3—bis (bis-(beta-chlorethyl) aminopropane dihydrochloride. The latter does not give as severe gastrointestinal symptoms but may produce depression and lethargy for 24 hours.

Nitrogen mustard therapy is of chief value in those lymphomas of a generalized character. It is likewise useful where a resistance to irradiation treatment has developed, or those in whom fibrosis of the lungs is present.

While this agent has not effected a cure, it nevertheless may bring about marked symptomatic improvement and in some cases prolong life. Upon going into solution and being injected intravenously, it combines with certain enzyme systems and produces cellular death. The clinical response is evident within a day or two days—with a lessening of fever and anorexia. The toxic effect on the blood and bone marrow is shown by a reduction in leukocytes and platelets within 10 to 14 days. Seldom is the deleterious effect alarming, although a blood transfusion may be needed.

Nitrogen mustard is administered intravenously, a total course consisting of 0.4 mg. per kg. of body weight. This can be given as 0.1 mg./kg. of the

*Presented at the Annual Meeting of the Virginia Academy of General Practice, May 7, 1954, Richmond, Va.

agent on four successive days, or some prefer to give the total dosage in one or two days. It is administered rapidly into the tubing of a freely running intravenous infusion. The agent should be prepared just prior to administration as the drug decomposes on standing. Nausea and vomiting are side effects that may be lessened with sedation and drugs commonly used for motion sickness. Remission of symptoms may last several weeks or several months. Three weeks should elapse before repeating this treatment. It would seem more logical not to repeat the treatment until the symptoms warranted it.

Triethylene Melamine (TEM)[1]—This compound resembles nitrogen mustard chemically and was originally used in Germany to improve the finish of rayon fabrics. Its action on neoplastic tissue is like that of nitrogen mustard, but it has the advantage of being administered orally.

Recovery from the marrow depression with TEM is slower and more difficult to evaluate. Relief of the patient's symptoms begins on an average of seven to nine days with TEM as compared to two or three days with nitrogen mustard.

Rundles and his associates[20,21] have viewed TEM as a significant advance in therapy notwithstanding its toxicity. They point out that its use in chronic proliferative diseases arising from the lymphatic tissue which are widespread is most promising, and compares with total body irradiation. Although TEM profoundly suppresses bone marrow constituents, its use in myelocytic leukemia, multiple myeloma, and polycythemia vera are disappointing. In chronic lymphatic leukemia, TEM is very effective and, because of the extreme sensitivity of the lymphocytes to its action, only small doses are necessary.

TEM is dispensed as a 5 mg. scored tablet. Dosage varies and should be controlled carefully. It is best given on an empty stomach with water and an alkali, such as sodium bicarbonate, to minimize decomposition before absorption has taken place. An initial dose of 2.5 to 5 mg. is given to observe the patient's clinical and hematologic reactions. This may be repeated in two or three days, or more often if indicated. Usually after a total of 10 to 15 mg. of TEM, a waiting period of two weeks is observed before any further dose is given. When the maximum benefit has been observed, maintenance therapy (1.0 to 5.0 mg. per week) may be instituted. Repeated peripheral blood examinations, leukocyte counts, and even bone marrow examination, should be performed at frequent intervals to maintain proper dosage control.

Urethane (ethyl-carbonate) has since 1946 been used with encouraging results in the treatment of chronic myeloid leukemia and in multiple myeloma.[21] Other varieties of myelogenous leukemia and polycythemia vera may also be controlled satisfactorily by Urethane. Its mode of action is probably due to the inhibition of the rate of neoplastic mitotic cell division.

Urethane is usually given in oral doses in enteric coated five grain tablets. A convenient plan of treatment is to give one gram daily in divided doses and increase gradually until three to five grams (9 to 15 tablets) a day are taken. Anorexia, nausea, vomiting, diarrhea, or even hepatitis may limit the dose. Usually within two weeks its effect is reflected in a marked lowering of the total white count and an improvement in the clinical symptoms. When this occurs, a maintenance dose of one to two grams is prescribed, and further dosage variance is guided by a rising or falling trend of the total leukocyte count. For safety, this count should not be allowed to go below 10,000 per cubic centimeter in the leukemias.

Fowler's Solution (Solution of Potassium Arsenite, U. S. P.)—This drug is probably one of the oldest used for the treatment of chronic leukemia, dating from 1865. After the introduction of roentgen therapy it was all but forgotten until Forkner and Scott[8] revived its use in 1931. Even so, the advent of new preparation causes this drug to be often forgotten in spite of its proven usefulness. Its mode of action is not clear, but the effect is like the remissions produced by x-ray. Most important, it is economical and available everywhere. It is sometimes effective when refractoriness to irradiation has occurred. Toxic symptoms as nausea, diarrhea, herpes, drying and scaling of the skin can be watched for by the patient and the drug stopped for several days with abatement of these symptoms. Resumption of the medication in smaller doses is usually well tolerated. Long term maintenance therapy at small expense with relatively little danger makes Fowler's solution an important agent in caring for patients with chronic myeloid leukemia.

The method used for administration of Fowler's solution is 3 to 4 minims in fruit juice or water three times daily following meals. This is increased by 1 minim three times daily every third or fourth day until a total of 30 to 40 minims total daily are given. When the maximum clinical improvement is noted and the leukocyte count approaches normal, the total dosage is decreased by 1 minim daily until an aver-

age of 15 to 24 minims daily are being taken. This is the maintenance dose and may be continued indefinitely unless clinical signs of toxicity warrant its discontinuance for several days.

Acute Leukemia

A diagnosis of acute leukemia presents a more difficult problem in management for the physician. There are many agents that have been advocated and many more that are being investigated.

Folic Acid Antagonists—Aminopterin (4-aminopteroylglutannic acid) and several other similar chemical compounds have been developed that interfere with normal cellular metabolism of the hematopoietic system. Folic acid and its converted folinic acid ("citrovorum factor") is probably essential for purine metabolism. Aminopterin is physiologically antagonistic to folic acid or the citrovorum factor or both, and thereby blocks cellular metabolism. It is this toxic action that gives the beneficial effect in acute leukemia.

Aminopterin is particularly useful in the acute leukemia of childhood, youth, and perhaps early adulthood. In adults over thirty years of age its toxic effects are so marked and its beneficial effects so uncommon, its use is questionable. In children and young adults, complete remissions both clinically and hematologically are obtained in approximately half of the cases.

Administration of aminopterin may be oral or intramuscular at 0.5 mg. to 2.5 mg. daily until a remission is achieved. After this, maintenance dosage must be individualized, but averages 0.5 to 1 mg. daily. Toxic effects are bone marrow depression with resultant thrombopenia and leucopenia, hemorrhagic phenomena, alopecia, oral or gastrointestinal tract ulcerations, and anorexia. The citrovorum factor (folinic acid) is reputed to be of benefit in relieving these toxic symptoms, yet not interfere with the antileukemic effect of the folic acid antagonist.

Remissions with aminopterin or other folic acid antagonists may be enhanced with concurrent or alternate use of the hormones ACTH or cortisone.[4]

Acth and Cortisone—These hormones judiciously used may effect striking remissions in acute leukemia. What their mode of action is remains unknown, but it does not appear to be due to tissue toxicity. Their action in chronic leukemia, lymphosarcoma, and multiple myeloma is not promising.

Because ACTH has to be given by injection (intramuscularly), we prefer the oral cortisone tablets because of ease of administration. In acute leukemia, we give 300 mg. in divided doses initially for the first twenty-four hours, gradually reducing the dose until a remission is obtained. After this, 50 to 75 mg. a day as a maintenance dose is given. Therapy should be continued for 10 to 14 days before declared a failure. Care must be taken to watch for cortisone side effects.

Mercaptopurine ("Purinethol"®)—This new drug has been developed at the Wellcome Research Laboratories[6] and shown by Burchenal and associates[2] to provide temporary remission, either partial or complete, of acute leukemia and of chronic myelogenous leukemia. It is apparently of no value in chronic lymphatic leukemia, nor is it of value in the treatment of solid tumors.

The theory for its action lies in its ability to interfere with nucleic acid metabolism. The hematologic effect is giving rise to a leucopenia, and, with excessive dosage, thrombocytopenia and bleeding. Toxic reactions are few except for mild gastrointestinal symptoms as nausea, vomiting, and diarrhea. The formed elements in the peripheral blood may fall for several days after stopping Purinethol®. It is important, therefore, to stop the drug as soon as the first evidence of a fall in the white cell count is noticed. If subsequent leukocyte counts remain constant for several days, or rise, treatment should be resumed. Maintenance dosage should be individualized to prevent an early relapse.

Purinethol® is dispensed as 50 mg. scored tablets. Dosage averages 100 to 200 mg. in the adult and 50 mg. in an average 5 year old child as the daily dose. It may be continued until a fall in the leukocyte count occurs and the precautions noted above observed. This may take place in 1 to 2 weeks. If there is no change within 4 weeks, careful increase of the dosage may be made.

Irradiation

X-ray remains the basic form of treatment for chronic leukemia and lymphoma. It is effective and available generally, but requires careful management by a trained roentgenologist, although supportive care by the clinician is essential. By cooperative efforts of these physicians, many patients may live useful lives for years in spite of their disease.

Localized treatment over local tumor masses, mediastinal nodes, or enlarged spleens relieves pressure symptoms and influences the blood picture. The resultant nausea and vomiting is rarely of major concern, and can be treated symptomatically.

Osgood and Seaman[17] have used with much success titrated, regularly spaced total body roentgen irradiation. The criterion for "titration" is the response

to previous therapy. This determined dose at the determined interval must be repeated while the condition of the patient is ideal. Using the regularly spaced, small doses of spray irradiation, patients with chronic leukemias are able to spend over 80% of their leukemic life span at their normal occupations.

Radioactive phosphorus has been used in the treatment of chronic myeloid leukemia, but is more hazardous than x-ray. This drug is primarily useful in polycythemia vera. It could not be used in general practice nor administered by any but trained personnel, as its use is under strict control of the Atomic Energy Commission.

Table I

Drugs Reported to Have Produced Granulocytopenia

Aminopyrine	Presidon ®
Butazolidin ®	Pyribenzamine ®
Chloramphenicol	Quinine
Dinitrophenol	Sufonamides
Dilantin Sodium ®	Tapazol ®
Gantrisin ®	Thiouracil
Gold preparations	Thiourea
Mesantoin ®	Tridione

Agranulocytosis

Heck[9] and Osgood[16] have emphasized the toxicity of various drugs that may cause marrow depression with resultant granulocytopenia, thrombocytopenia, or anemia. The drugs so implicated are numerous and are being added to as newer drugs are introduced to the profession. Aminopyrine, in sensitive individuals, sulfonamides, and other drugs shown in Table I, have been reported to cause agranulocytosis or other evidence of marrow hypoplasia.

Now that members of the aminopyrine group or drugs containing aminopyrine itself are again being recommended for treatment of rheumatoid arthritis, we need constantly to remind ourselves of the possible dangers of these drugs. A recent report by Hinz and Associates[11] is one of many showing toxicity to phenylbutazone.

Many methods or agents have been recommended for treatment. Among these are transfusions, typhoid vaccine, yellow bone marrow, Pentnucleotide®, liver extract, and ACTH and cortisone. All of these have been used in an effort to stimulate a depressed bone marrow. Their efficacy has not been remarkable. Today, treatment, with antibiotics is believed to offer protection to certain individuals who otherwise might succumb to an infection. Careful supervision of the patient, particularly in using new or drugs reported to be dangerous, is of utmost importance.

Infectious Mononucleosis

This common disease affects chiefly children and young adults, although no age is excluded. Because of its morbidity and long convalescence, treatment other than symptomatic therapy would be welcome. Schultz and Hall,[22] in their recent study, demonstrated that penicillin or aureomycin gave clinical improvement in about half of their cases. This consisted in a lessening of fever, toxicity, and sore throat within 48 hours.

Others[5] have shown that ACTH given by eight hour intravenous drip caused fever to decrease, cervical glands and enlarged liver and spleen to recede, and clinical improvement start, whereas aureomycin therapy before had failed. This therapy is not recommended routinely, and should be reserved for the more acutely ill patients.

Anemias[13,23,25]

Anemia is the most frequently encountered blood problem in practice. By definition, anemia is meant to be a reduction in the hemoglobin or number of erythrocytes or both below the accepted normal values. If 15.6 grams of hemoglobin is considered 100 per cent, 13.3 grams (85 per cent) and 12 grams (77 per cent) would be the low normal values for men and women, respectively. Total erythrocyte counts normally vary between 4.7 to 4.13 million. During the last trimester of pregnancy 10 grams of hemoglobin (64%) is the low normal for physiological anemia of pregnancy. This is due to a maximum dilution of the blood because of the increased blood volume.

Anemia of Chronic Infection—Sturgis, reporting on 25,000 admissions seen at the University of Michigan, found this mild anemia to be most common. One of every eight patients had hemoglobin values of approximately 9.5 grams (60 per cent) and the smear was normocytic, normochromic, i.e., normal in appearance.

Chronic nephritis with or without azotemia, chronic pulmonary infections, rheumatic infections, but especially genito-urinary infections have been the chief sources for this anemia. Treatment with antibiotics or other methods to eradicate the infection must be accomplished before the blood responds favorably, if then. Transfusions, if needed, may be the only treatment. Apparently there is a disturbance with hemoglobin metabolism, either through increased destruction or a depression of the bone marrow. The latter, is more probable.

Iron-Deficiency Anemias—These anemias are next most common and are typically microcytic and hypochromic in type. Most often the iron deficit

indicates chronic hemorrhage. This is an important finding especially in adult males or females past the menopause, and its cause should be carefully investigated. In infants and early childhood, during pregnancy and lactation, it is most often due to a nutritional basis. Menstrual blood loss like blood loss from hemorrhoids, or a peptic ulcer is too often minimized as a cause for this anemia.

Treatment consists in supplying an iron preparation in adequate doses orally. Ferrous compounds as 0.3 grams (5 grains) given three times daily will usually show a favorable response within two weeks. In pre-menopausal females it is advisable to have them take an iron preparation two weeks in each month to supplement that iron lost in the menstrual discharges. This precautionary measure may help prevent a recurrence of the anemia.

Other factors should be considered. An adequate diet in proteins, vitamins, if needed, and especially vitamin C help these patients response to iron. Moore and his associates[14,15] showed that vitamin C reduces ferric compounds to the ferrous state and so facilitates iron absorption. It has been found that 50 to 100 mg. of ascorbic acid given three times daily is adequate for this purpose.

Occasionally, it may be found necessary to administer iron parenterally. This should not be regarded as routine treatment. It should be reserved for those special cases where oral iron cannot be tolerated or where, because of intestinal surgery or infection, absorption is not effective. Feojectin®, a sacchrated iron oxide, is effective when used with proper precautions. There are usually few side effects and the chief danger would lie in overzealous use of this therapy. Since it is completely absorbed into the circulation, that not utilized is stored in the reticuloendothelial system. Continued use of intravenous iron would, like repeated whole blood transfusions, lead to possible hemosiderosis. In giving intravenous iron, the calculated dose must be adhered to for this reason. For comparison, 5 cc. of the saccharated iron oxide is equivalent to 100 mg. of elemental iron, whereas, a 500 cc. whole blood transfusion is equivalent to approximately 250 mg. iron.

Anemia of Pregnancy—As indicated previously, 10 grams of hemoglobin (64 per cent) during the latter part of pregnancy is a low normal value. This is due to hemodilution. Below this value, a true anemia of two types may be found. Most common, an iron deficiency type, may be treated as such. The other, a macrocytic anemia has been termed "Pernicious Anemia of Pregnancy". It is due to a deficiency in the diet, chiefly of protein. Supplemental protein and folic acid, 10 to 15 mg. daily, will correct such an anemia. Liver extract given intramuscularly is also effective, but vitamin B_{12} is not.

It should be emphasized that the large number of pharmaceutical compounds combining all the known vitamins, copper, cobalt, B_{12}, folic acid, liver extract, and iron are needlessly expensive and confuse an otherwise clear clinical and hematologic picture. Their use is to be condemned as the specific needs of the patient is masked by this improper therapy.

Pernicious Anemia and Related Macrocytic Anemias

Pernicious anemia is the most common of the macrocytic anemias seen. Its recognition and differentiation between other macrocytic anemias is important because death ensues within three years in almost all patients unless adequate treatment is given.

Treatment of pernicious anemia should be adequate to arrest or prevent combined systems disease. Inadequate therapy, especially with one of the aforementioned oral combinations of vitamins, liver, folic acid, and minerals, may give a false sense of security by producing a hematologic response, but allowing spinal cord damage to progress. It is for this reason that folic acid is no longer regarded as safe as the sole therapeutic agent for this disease.

Liver extract given intramuscularly as 15 units or vitamin B_{12}, 15 micromicrograms daily for one week, then twice weekly until the blood picture is normal is considered adequate. Following this, a maintenance dose in the same amount every three weeks is considered sufficient. For those patients with early cord changes the dose may be doubled or tripled and given weekly as neurologic improvements are sometimes slow. Physiotherapy is helpful in such problem cases. Vitamin B_{12} has become more popular than liver injections because it is cheaper, more easily standardized, less painful, and no allergic reactions have been noted.

Nutritional Anemias—These include the macrocytic anemias of tropical and non-tropical sprue, of pregnancy, those anemias following gastrointestinal surgery, and megaloblastic anemias of infancy.

All have one common characteristic in that folic acid in oral doses of 10 to 20 mg. daily is effective therapy. The addition of proteins in the diet of those anemias of pregnancy is advisable. Likewise, in these an iron deficiency requiring iron may co-exist. In the magaloblastic anemia of infancy, vitamin C

deficiency may exist, and 150 mg. orally each day as a prophylaxis is recommended.

Other Macrocytic Anemias—Those anemias seen in hypothyroidism, liver disease, and intestinal parasites, such as the fish tape worm, do not respond to specific therapy until the underlying disease is treated. When this accomplished, treatment is like that of pernicious anemia.

Summary

Treatment of some of the more common blood and related diseases encountered in general practice has been given. Particular stress has been given those preparations and methods that are available to every physician, regardless of his location or facilities.

References

1. Axelrod, Arnold R.; Berman, Lawrence; and Murphy, Roland V.: Clinical and Hematologic Effects of Triethylene Melamine, Am. J. Med., 15:684-694, (Nov.) 1953.
2. Burchenal, J. H.; Murphy, L.; Ellison, R. R.; Karnofsky, D. A.; Sykes, M. P.; Tan, T. C.; Leone, L. S.; Craver, L. F.; Dargeon, H. D.; and Rhoads, C. P.: Clinical Evaluation of a New Antimetabolite, 6-mercaptopurine, in the Treatment of Leukemia and Allied Diseases, Blood, 8:965-999, (Nov.) 1953.
3. Crockett, Charles L., Jr.; Shotten, Donald; and Leavell, Byrd S.: Treatment of Leukemia and Lymphoma. Virginia M. Monthly, 80:69-72, (Feb.) 1953.
4. Dameshek, William: The Outlook for the Eventual Control of Leukemia, New England J. Med., 250: 131-139, (Jan. 28) 1954.
5. Doran, Joseph K., and Weisenberger, Austin S.: Use of ACTH in Infectious Mononucleosis, Ann. Int. Med., 38:1058-1062, (May) 1953.
6. Elion, G. B.; Hitchings, G. H.; and Vanderwerff, H.: Antagonists of Nucleic Acid Derivatives. VI. Purines, J. Biol. Chem., 192:505, 1951.
7. Folley, J. H.; Borges W.; and Yamawaki, T.: Incidence of Leukemia in Survivors of the Atomic Bomb in Hiroshima and Nagasaki, Japan, Am. J. Med., 13:311, 1952.
8. Forkner, C. E. and Scott, T. F. M.: Arsenic As a Therapeutic Agent in Chronic Myelogenous Leukemia, J.A.M.A., 97:3-5, (July 4) 1931.
9. Heck, Frank J.: The Influence of Drugs on Blood and Bone Marrow, Postgrad. Med., 13:185-193, (Mar.) 1953.
10. Hempleman, L. H.; Lisco, H.; and Hoffman, J. G.: The Acute Radiation Syndrome: The Study of 9 cases and the Review of the Problem, Ann. Int. Med., 36:279, 1952.
11. Hinz, C.; Lamont-Havers R. W.; Comisky, B.; and Gaines, L. M.; Agranulocytosis Following Use of Phenylbutazone (Butazolidin), J.A.M.A., 151:38-39, (Jan. 3) 1953.
12. Leavell, Byrd S.; Cash, James R.; Barker, Allen; Tucker, H. St. George, Jr.: Panel Discussion on the Treatment of Malignant Lymphoma, Virginia M. Monthly, 81:166-170, (April) 1954.
13. Limarzi, Louis R.: Treatment of Blood Dyscrasias, Postgrad. Med., 10:51-56, (July) 1951.
14. Moore, C. V.; Arrowsmith, W. R.; Welch, J., and Minnich, V.: Studies in Iron Transportation and Metabolism. IV. Observations on the Absorption of Iron from the Gastro-Intestinal Tract, J. Clin. Investigation, 18:553-580, 1939.
15. Moore, C. V., and Duback, Reubenia: Absorption of Radio-Iron from Foods, Science, 116:527, (Nov. 14) 1952.
16. Osgood, Edwin E.: Drug Induced Hypoplastic Anemia, and Related Syndromes, Ann. Int. Med., 39:1173-1189, (Dec.) 1953.
17. Osgood, Edwin E., and Seaman, A. J.: Treatment of Chronic Leukemias by Titrated, Regularly Spaced, Total Body Irradiation, J.A.M.A., 150:1372-1379, (Dec. 6) 1952.
18. Paterson, E.; Haddow, A.; Thomas, I., and Watkinson, J. M.: Leukemia Treated with Urethane Compared with Deep X-ray Therapy. Lancet, 1:677-682, (May 11) 1946.
19. Peller, S., and Pick, P.: Leukemia and Other Malignancies in Physicians, Am. J. M. Sc., 224:154, 1952.
20. Rundles, R. Wayne, and Barton, W. Bruce: Triethylene Melamine in the Treatment of Neoplastic Disease, Blood, 7:483-507, (May) 1952.
21. Rundles, R. W.; Barton, W. B., and Coonard, Evelyn V.: The Role of Chemo-Therapy in the Management of Malignant Lymphomas and Leukemias, South. M. J., 46:259-268, (Mar.) 1953.
22. Schultz, Alvin L., and Hall, Wendell H.: Clinical Observation in 100 Cases of Infectious Mononucleosis and Results of Treatment with Penicillin and Aureomycin, Ann. Int. Med., 1498-1512, June, 1952.
23. Sturgis, Cyrus C.: Advances in Our Knowledge Concerning the Etiology and Treatment of Hematological Disorders, Bull. New York Acad. Med., 25: 84-99, 1949.
24. Sykes, M. P.: Treatment of the Leukemias and Lymphomas; Current Trends, J. Am. M. Women's A., 7:321, 1952. Woglom, quoted by Sykes.
25. Wright, Claude-Starr; Sundharagiati, Bundham; Bass, Joseph A., and Bunner, Alvinza E.: Review of the 1952 Hematology Literature, Arch. Int. Med., 92:357-437, (Sept.) 1953.

Lee Medical Building

A Freeze-Dried Artery Bank

EDWARD R. HIPP, M.D.
GEORGE R. MINOR, M.D.
Charlottesville, Virginia

ABOUT 1900 Alexis Carrel predicted the replacement of diseased or injured areas of the vascular system with suitable counterparts removed from another body. Indeed, by the application of precise methods, he actually accomplished this feat in the laboratory. The reproduction of such success in the human patient with an analogous clinical situation, however, was not so simple, for several reasons. In the first place, instruments were not then available for the control of large vessels without injury to them; moreover, an anastomosis was usually performed with variable degrees of longitudinal tension because of the lack of a suitable prosthesis to bridge any gap resulting from excision. Finally, the clinical surgeons usually failed to reproduce in the operating room the delicate aseptic technique used by Carrel in the laboratory. In a few successful cases veins were used as autografts but the disastrous results of vascular failures made a lasting impression. Enthusiasm accordingly waned and was not revived until the second World War. At that time, however, available methods of vascular repair gave no better results than ligation of major arteries.

Nevertheless, those failures furnished the stimulus to improve and standardize vascular techniques and to seek a dependable graft, when end-to-end approximation was impossible. As had been taught by Carrel, "latent life" or cellular life was thought by the early investigators to be a prerequisite for survival of a graft. The feeling that life was necessary to preserve mechanical function was conclusively disproven by Guthrie, a contemporary of Carrel, and by Levin and Larkin in 1907. Both Guthrie and the later two investigators implanted formalinized and obviously dead arterial segments with good functional results. Even though the graft itself became a calcified sequestrum, its ability to conduct blood was not particularly impaired. The recognition that the engrafted tissue served only as an arbor for cellular invasion by the host was very important in the development of current techniques.

At the University of Virginia Hospital in 1952 vascular grafts were difficult to obtain and problems requiring their use had to be treated by the best available alternative methods. Consequently, it was decided to assemble the apparatus for one of the three recently developed methods of preservation. The liquid media method (Gross, Swan) was thought to be unnecessarily laborious and wasteful. The preservation of frozen grafts with dry ice refrigeration involved considerable expense. Preliminary reports of freeze-dried arterial segments seemed to be the most promising. After consultation with the Staff of the Tissue Bank of the National Naval Research Center, in Bethesda, plans was made for establishing a freeze-dried artery bank at Charlottesville. Since the commercial freeze-driers were found to be unnecessarily large and expensive, a smaller unit designed by Pate and Strong, of Bethesda, was chosen. This was constructed by the machine shop of the University's Physics Department for about $400.00. An additional $300.00 was required for a Stokes-McLeod vacuum gauge and a Welch Duo Seal vacuum pump.

The completed apparatus (Fig. 1) is composed of a vacuum pump (left), an upright water condenser cooled to -40 degrees C. by the refrigeration unit below the table (center) and a manifold with eight outlets which attached to large test tubes immersed in a mush of CO_2 ice and alcohol in a Sears Roebuck portable ice box (right).

The apparatus was first proven efficient by animal experimentation. Twenty-six mongrel dogs were used as recipients for aortic segments removed and freeze-dried from donor animals 2-3 months before. In these animals there was only one graft failure due to thrombosis, an incidence of 96.2% graft successes.

Following the successful animal work, a human artery bank was developed on the same plan. Aortic segments were obtained from accident victims under aseptic conditions. These were freeze-dried and stored in vacuum bottles (Fig. 2) available for reconstitution and use in vascular problems. To date, these segments have been used to replace obliterated segments of external iliac arteries in two patients. In both cases there has been an obvious increase in the arterial supply to a previously ischemic extremity. In one case there has been a return of dorsalis pedis and posterior tibial arterial pulses which were absent preoperatively.

One abdominal aneurysm has been attacked. This was a huge post-traumatic (mule kick) abdominal aneurysm from the renal arteries to the iliac arteries

GEORGE R. MINOR, M.D., *Department of Surgery, University of Virginia School of Medicine, Charlottesville, Virginia.*

*Abridgement of thesis submitted to Graduate Faculty, University of Virginia, in partial fulfillment of requirements for degree, Master of Science.

bilaterally. Because of proximity to the renal arteries no margin of aorta was available for suture. Therefore, the aorta was controlled above and the aneurysmal sac was entered. A freeze-dried homograft was sutured to the aortic ostium above and to the two iliac ostia below, within the sac. The graft was successfully implanted but a leak developed posterior to the superior anastomosis necessitating removal of the graft. The sac of the aneurysm was plicated and the patient recovered and has continued to do well to date.

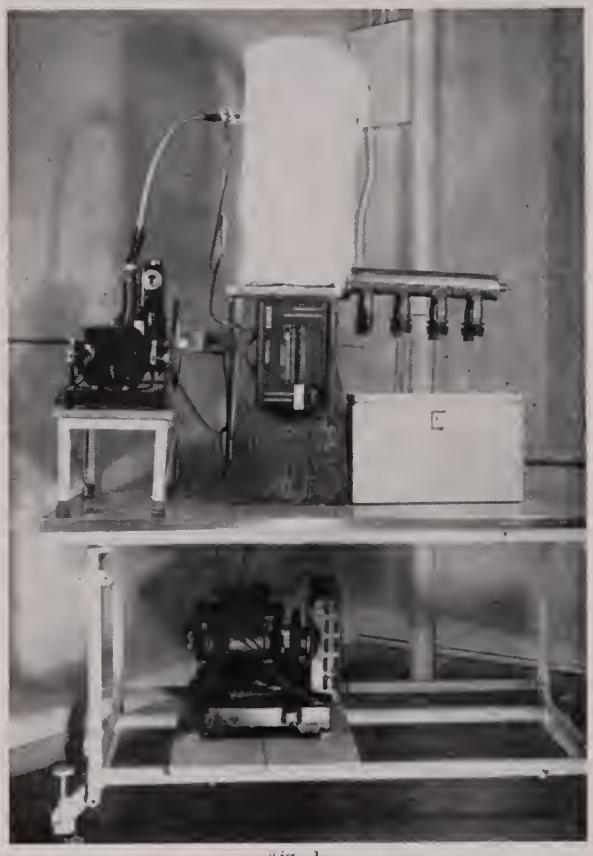


Fig. 1.

Conclusions

1. Freeze-dried homografts are suitable vascular prostheses to bridge arterial defects.
2. They serve as a scaffold for cellular invasion from the recipient host.
3. Despite their non-vital nature, they serve as dependable, adequate mechanical conduits of blood.

Summary

A freeze-dried human artery bank established at the University of Virginia Hospital in November, 1953, is briefly described. The freeze drying apparatus was constructed by the University of Virginia Physics Department and standardized by animal experimentation before clinical use was undertaken. Brief accounts of three clinical experiences with freeze-dried arterial homografts were given.

The authors wish to acknowledge their indebtedness to Dr. Robert Caldwell for operative assistance, to Mr. Boyd Perry for technical aid, and to Miss Ann Russell for photographs.



Fig. 2.

Bibliography

Brown, Robert B.: Freeze Dried Arterial Homografts, Surg., Gynec., and Obst., 97:657-664, December, 1953.

Carrel, Alexis: Results of the Transplantation of Blood Vessels, Organs and Limbs, J.A.M.A., 51:1662, 1908.

Carrel, A.: Latent Life of Arteries, J. Exper. Med., 12: 460, 1910.

Bakey, M., and Cooley, D.: Surgical Treatment of Aneurysm of Abdominal Aorta by Resection and Restoration of Continuity with Homograft, Surg., Gynec., and Obst., 97:257-266, Sept., 1953.

Flosdorf, E. W.: Freeze Drying (Drying by Sublimation), New York: Reinhold Publishing Corp., 1949.

Guthrie, C. C.: End Results of Arterial Restoration with Devitalized Tissue, J.A.M.A., 73:186, 1919.

Levin, I., and Larkin, J. H.: Transplantation of Devitalized Arterial Segments: Morphological Changes in the Implanted Segments, J. Med. Research, 21:319, 1909.

Marrangoni, A. G., and Cecchini, L. P.: Homotransplantation of Arterial Segments Preserved by the Freeze-Drying Method, Ann. Surg., 134:977-983, 1951.

Pate, James W., *et al.*, Early Results in the Experimental Use of Freeze Dried Arterial Grafts, Surg., Forum Am. Coll. Surgeons, 147-151, 1952.

Speculations on the Common Cold

R. O. SMITH, M.D.
Pulaski, Virginia

THE common cold is one of the most disastrous forms of pestilence that mankind has ever known. After all the years, however, the response of the patient remains as artlessly simple as the crying of a baby, and far less effective. I am convinced that a brighter future is possible, if we will take a determined stand. We must have the courage of our convictions, which must come from our own experience. We are fortunate in one respect, at least, that the most completely equipped laboratory available anywhere for the study of this disease is one's own body.

An epidemic of colds is commonplace. It is seldom, if ever, simple. Actually there must be a complexity of conditions which potentiates and characterizes each and every epidemic. Colds are found rarely in the summer months. This fact raises the question of a carrier state. Also, it suggests that some injury or unfavorable environmental condition of the nasal mucosa is a factor in the incidence of the disease. Further, there must be a susceptible population with opportunity for direct transmission. There may be only one strain of the cold virus present. More rarely a second epidemic may be superimposed on the first. Then we must remember that our susceptible population will be exposed to any number of bacterial pathogens. I think it is generally agreed that these bacteria are secondary invaders of the respiratory tract. I feel, personally, that they are not only secondary in time to the common cold, but that they are secondary in importance also, in spite of what is sometimes their extraordinary, and even fatal, virulence. Finally, it has been interesting to me to find some evidence from personal experience that a mild infection, apparently sensitive to penicillin, may precede, and perhaps determine, the incidence of a cold.

Clinically, the common cold is an acute, infectious, catarrhal rhinitis. It may be either endemic or epidemic. The onset is relatively sudden, but somewhat variable. It may seem to run its course in three or four days but the actual duration is often in doubt. The symptoms of the cold dovetail so with those of the complications that one can scarcely say where the one begins and the other ends.

Bryan and Bryan[1] have done much recently to clarify the pathology of acute upper respiratory infections. Their studies of nasal secretions revealed a massive exfoliation of ciliated columnar epithelial cells chiefly from the second to the fifth day of the disease. They thought the location of the disease probably was in the nucleus of the epithelial cells. Their findings chart the course of the common cold with its obvious self-limitation. They represent graphically the tremendous damage which is done to our nasal defenses. Thus the cold and its complications are bound inextricably together. A discussion of the cold without reference to its complications would be meaningless.

The prophylactic treatment of the common cold may be effected some day through immunization. At present, we try to avoid chilling of the body and excessive drying of the nasal and pharyngeal mucosa. Humidification of the winter air is certainly desirable. Isolation is seldom more than a gesture, but if we really care whether we take a cold or not, it must be rigidly enforced.

All further attempts and methods of treatment have these goals—to make the patient comfortable, to shorten the course of the disease, and to prevent or reduce its complications. I will not attempt to estimate how frequent and serious these complications may be, but I would like to suggest that not all patients present themselves soon enough for the etiology of their misery to be evident. There are many other cases where the origin of the pathological condition is lost to memory.

The question naturally arises, can we achieve these goals? In the past, there has been much pessimism in the minds of our profession. This pessimism is mistaken. I believe also that the same measures which make the patient truly comfortable are those which will also control the sequelae. Success depends, however, on an appreciation of the pathology. It will follow the rigid adherence to a simple technic. Our whole aim must be to protect a severely inflamed and vulnerable nasal membrane. There must be no compromise with this ideal.

The greatest insult which is universally perpetrated upon the nose is the voluntary act of blowing and

*Read before the Southwestern Virginia Medical Society, at Roanoke, Va., September 16, 1954.

1. Transactions of the American Academy of Opth. and Otol., P. 171, 56: 1952.

snuffling. The greatest injury of all will result from an inspirational effort. Here the intrachoanal air pressure is reduced, the vessels fill, and the mucosa swells. Conversely, a forcible expiration will flatten out the mucosa, and the damage will be definitely less. Sneezing is supposed to be harmful, but it is rarely important. One can protect himself, in sneezing, by holding the head back and keeping the mouth open. If one wishes to do his utmost to soften a sneeze, he should hold up one or both arms. This will greatly reduce the contraction of the thoracic cage. Patients will complain bitterly of sneezing, but I am convinced that what they do before and after the sneeze is more important. I would suggest that the prolonged and probably uneven pressure waves produced by voluntary blowing and snuffling build up destructive vibrations in the blood-filled nasal mucosa. I do not believe that one may blow his nose during a cold even once without important damage.

When we are confronted with a patient, snorting, snuffing, hawking, and rasping his nose with a lump of kleenex, it is quite obvious that we must proceed cautiously if we hope to arouse his interest and to prepare him to accept new ideas. An explanation of the pathology and physiology will appeal to many patients. One may stress the fact that the nose has a definite function. It warms and moistens the air so that it may meet the specifications of the bronchial tree and lung. A sick nose cannot be expected to function like one that is well. The intelligent patient will appreciate that the blockage of the nose which he experiences is a form of splinting. It can be pointed out to him also that drainage of the nasal secretions depends on the ciliated epithelium, which operates efficiently only if it is moist, a condition which is favored by congestion of the nose with narrowing of its passages. Also the healing process, in general, demands an active hyperemia. We must, above all else, condition the patient to accept the idea that the aim of treatment is not to "open" the nose, but to heal it.

There are patients too immature to tolerate either the thought or threat of a congested nose. Other patients are faint-hearted and need encouragement. In general, the things which are hard to do are those which we think are not worth doing. It is important that the patient be prepared to experience a certain amount of nasal congestion but it is not necessary to abandon him at that point. Rather we may promise to all that proper observance of hygienic principles will permit the nose to open by itself and that it will remain open.

I see very littled need, or excuse, for the use of nose drops. This does not mean that nasal decongestants cannot be used in such a way, for instance by the physician, that they will be of benefit. I concede also that their use in infants presents a special case which I shall not consider here. I will only say that self-medication with nasal decongestants is as useless as it is unsafe. The most positive, dramatic and enduring relief for the congested nose will result from leaving it absolutely alone.

Rarely, if ever, can a patient be trusted to carry out such advice. It becomes necessary to protect him against himself, and the ideal solution to this difficult problem must be acceptable both æsthetically and socially. I am still looking for such a solution.

Blowing the nose in any form is prohibited. I offer a substitute technique which consists of compressing the soft parts of the nose gently, evenly and slowly with a cotton or linen handkerchief. Haste, which is almost universal, will irritate the nose as well as prevent the absorption of the secretions. This technique involves a generous supply of adult-sized handkerchiefs. It is not adapted to the lazy person but it is effective.

Many patients obtain relief from covering the nose and mouth with a handkerchief or surgeon's mask. While a mask suggests solicitude for others, its use is often limited to the privacy of the bedroom. The use of a mask is followed almost at once by subjective improvement. The patient no longer feels that his nose is ever ready to drip. Perhaps there is a psychic effect, but certainly there is a physical improvement also. The mask will pick up moisture from the saturated air as it is exhaled and, conversely, it will tend to moisten the dry air from the outside on inhalation.

Sometimes, because of the patient's past experience, or from the urgency of the present situation, I dare to meet the problem head on with a fool-proof method. This consists of fastening a light gauze pad before the nostrils with adhesive tape. The use of cotton tampons loosely in the very tip of the nose would serve the same purpose but requires even greater cooperation. These precautions can be of the greatest importance. They can be relaxed whenever the patient can be trusted to treat his air passages with respect. A few patients learn quickly. Others never learn. Many are quite positive they have followed all instructions, but the history which the patient gives in this regard is generally without meaning. Nothing is valid except that which we see.

Undoubtedly the patient would be better off in bed. First, this would reduce the work load of the respira-

tory tract with a train of benefits. Second, the patient would be free to concentrate his attention on the protection of the nose without pressure from tribal conventions.

I believe it is important for the patient to sleep on the side, alternating the position, according to the circumstances. It is interesting that Hippocrates noted this was the position typically assumed by persons in health. Many patients recognize that the dependent side of the nose tends to become congested, while the upper side will become clear. Perhaps there are many among us who appreciate what an all-important aid the position of the patient can be to both circulation and drainage. Such a technique may sometimes appear to interfere with satisfactory sleep, but sleep is of secondary importance. For those who wish to lie on the back, it will help to keep the head slightly elevated and turned to one or the other side. Certainly in the early stages of a cold, alteration of posture according to the state of the nose, or ears, will have the definite effect of reducing complications.

In the beginning of a cold the secretions are copious and quite fluid. The problem of drainage is imagined, rather than real. We all see patients who are obsessed with fear of their nasal secretions. This fear is often chronic with unhappy, distressing results. My own observations, while limited, suggest that the original nasal infection is highly specific, and the secretions which derive from it are relatively innocuous to other tissues. No matter how desirable cleanliness, as interpreted by the laity, may be, every principle of nasal hygiene is embraced by these two words, *be gentle.*

In the later stages of a cold, help in the removal of secretions would be appreciated, even if seldom necessary. I believe it would be worth while for the patient to visit his physician for this purpose. A few patients may be trusted to make use of a normal saline solution administered by a Birmingham douche. Also, a few drops of a solution such as alkalol may comfort those patients with thick, gummy secretions in the nasopharynx. If the nose must be blown, the handkerchief should be held in front loosely.

I will say very little about the use of medicines because such treatment relates more to the management of complications than of the cold itself. I am especially interested in the use of thyroid in selected cases and where it is tolerated, at least briefly. I can imagine that anthistaminics may help certain patients with respect to secondary invaders. I think that the sipping of hot drinks is a useful measure which should always be kept in mind. I am sorry the role of the antibiotics is not better understood. It is true they have no effect on the cold itself. It is also my belief that one would rarely need them. would he adhere strictly to the principles and technique which I have suggested or described. But life is not ideal. My experience has been that many and probably most of the patients who present themselves for treatment of a "cold" have already experienced a secondary infection. Such patients certainly can be helped by one or another of the antibiotics. One must assess the patient carefully, his emotional stability, his present condition, and his past experience, all this in the light of all we know about the current epidemic. Sometimes it will be a mistake to administer an antibiotic. More often the mistake will be that we did not administer enough.

Summary

I have suggested the great complexity of the epidemologic factors associated with the common cold. Both the immunologic strain and its virulence may vary. The onset of a cold is often determined by some insult to the nasal mucosa. This may be environmental, and conceivably may be bacterial. Again, there are almost unlimited possible combinations of the cold virus with secondary bacterial invaders, and unlimited possible sequelae. The common cold, itself, does not kill, but it turns the key which lets the killer in.

The nasal mucosa is tremendously damaged by the cold, but voluntary mechanical injury is even more important, and will determine, in general, the incidence and course of complications. An effective, prophylactic technic is possible. It is not difficult, and any patient may learn. The watch word is "be gentle".

No history of a cold is complete which does not inquire into the position of the patient during sleep. Attention to this detail will insure a rich reward.

When the patent first presents himself for treatment of a cold, it is probable that secondary invasion has already begun, and the desirability of specific treatment must be considered.

Finally, *we can do something for a cold.* There is no greater fallacy than to think our only treatment is to make the patient comfortable. Treatment, to be effective, must be adequate. Half-hearted efforts will fail. The patient must be educated and aroused, but, first, we must arouse ourselves.

73 Third Street, N.W.

Treatment of Snake Venom Poisoning With ACTH and Cortisone

JOHN THORNTON WOOD
Charlottesville, Virginia
WILLIAM W. HOBACK, M.D.
Richlands, Virginia
THOMAS W. GREEN, M.D.
Bristol, Tennessee

RECENTLY two of the authors[1] reported their observations of the favorable clinical response to the effects of cortisone or corticotropin in the case of three children who had been bitten by venomous snakes. The use of these substances in the treatment of ophidian venenation, in addition to the standard surgical and specific therapy, had not been previously reported in the literature. This report, summarizing the clinical evaluation of response in 15 additional cases, is provided to further clarify the role of these drugs in this therapy. Two of the cases here reported have been treated by the authors, and the remaining 13 have been obtained from a study of medical records, and, in addition to this, in four of the cases, from detailed reports from the attending physicians. Medical records were made available for this study by the following institutions: Clinch Valley Clinic Hospital, Richlands, Va.; Lee General Hospital, Pennington Gap, Va.; Lynchburg General Hospital, Lynchburg, Va.; Mary Washington Hospital, Fredericksburg, Va.; Medical College of Virginia Hospitals, Richmond, Va.; St. Mary's Hospital, Norton, Va.; and University Hospital, Charlottesville, Va.

The extent of morbidity following the bite of venomous snakes of a single species has been shown to be highly variable[2]. It is related to the degree of toxicity and volume of venom introduced through the wounds, the effectiveness and rate of distribution of the venom and of toxic substances in the edema fluid from the wound into the lymphatic and systemic circulations, and by the extent of the allergenic or anaphylactoid response of the victim to the introduced foreign protein. The bite of a poisonous snake is not invariably followed by the development in the patient of venom poisoning. In a recent report[3] it was pointed out that in 18 cases in which the snake causing the injury was positively identified as a highly venomous species, only 12 of the patients showed any systemic signs of venom intoxication. An attempt to clinically evaluate the degree of seriousness of the intoxication was used recently[2] but the clinical criteria distinguishing between light, medium, severe, and critical cases were not given. To clarify the roles of cortisone and corticotropin in ophidian venenation therapy the cases presented here are classified clinically into three degrees of severity as determined from the extent of local and systemic involvement. The ranking of a case into the groupings of minimal, moderate, or severe venenation is based upon the severity of the presenting signs and symptoms, and upon the course of the case during the first twelve hours of hospitalization, as follows:

Grade I. Minimal venenation. These include cases having a history of suspected snake bite plus localized signs including the presence of one or more puncture wounds (occasionally obscured by an edematous tumefaction surrounding the wound site), moderate pain or throbbing localized at the fang wounds, and an area of edema extending not more than a few inches from the point of initial venenation. The hospital course in the subsequent 12 hours provides no evidence of systemic involvement.

Grade II. Moderate venenation. Patients classed in this group demonstrated the signs of Grade I poisoning during a brief early stage in their intoxication, but soon had more severe and widely distributed pain, and more marked edema which would continue to progress up an extremity toward the trunk during the first 12 hours of hospitalization. In most cases the edematous area involved about half of the distance between the bite site and the trunk; regional lymph nodes were palpable and tender. Nausea, vomiting, and giddiness were usually present. Petechiae and ecchymoses were restricted to the area of edema. A low grade temperature usually developed and persisted for from one to four days.

Grade III. Severe venenation. These patients may resemble Grade I, and frequently resemble Grade II on admission, but the course of their intoxication is rapidly progressive. These patients may arrive in shock within a few minutes of the time of injury.

Within 12 hours the edematous area extends from a bite site on an extremity to or involving part of the trunk. Petechiae and ecchymoses are frequently generalized in distribution. During the first 12 hours of therapy the pulse becomes rapid and thready, the temperature becomes subnormal, and the patient approaches a state of shock.

Of the 15 cases briefly reported here five are Grade I, seven are Grade II, and three are Grade III.

Report of Grade I Cases

Case 1. A 5-year old white male child was admitted to the University of Virginia Hospital on June 29, 1953, because he had received a copperhead bite on the fourth digit of his left hand. He arrived in the emergency room about 30 minutes after the accident; temperature on arrival was 98° F., and the patient was in no acute distress. Immediate therapy consisted of the use of tourniquet proximal to the wound, and incision and suction of the puncture sites. The patient was not sensitized to horse serum, and he was promptly administered 15 cc. of antivenin, tetanus antitoxin, antibiotics, and symptomatic drugs. He was put at bed rest with his left hand immobilized and chilled with ice bags. ACTH (25 mgm. b.i.d.) was started at once. "Recovery followed a rapid and benign course, and the patient was dismissed on the third hospital day."

Case 2. A 5-year old white male was admitted to St. Mary's Hospital, Norton, on May 28, 1953, because of rapid swelling of the right ankle, accompanied by pain and ecchymosis. Although snake venenation was suspected, fang marks could not be distinguished. The temperature on admission was 99° F., and the patient was in moderate pain. Antivenin therapy was initiated, and cortisone (12.5 mgm. t.i.d.) was ordered. The edema was progressive, and a second ampule of antivenin was injected on the second day. The cortisone therapy was continued until the patient was dismissed on the sixth day. "The patient had a relatively mild course and responded well to therapy."

Case 3. A 7-year old white male was admitted to Lee General Hospital on July 29, 1953, because of a snake bite on his left forearm. He had been bitten three hours prior to admission by a small timber rattlesnake. Temperature on admission was 100°F., and the patient complained of pain and throbbing in the injured area. There was a slight edema at the time of admission around the fang wounds. The extent of venenation was not considered severe enough to require antivenin; the patient received antihistaminics, and ACTH therapy. He improved rapidly, and was dismissed asymptomatic after 24 hours of hospitalization.

Case 4. A 43-year old white male was admitted to Mary Washington Hospital on July 8, 1953, because of a copperhead bite on the right hand. Temperature on admission was 99.5° F., and the patient complained of throbbing pain in a moderately edematous hand. Initial therapy included the use of tourniquet, and incision and suction of the fang wounds. The hand was immobilized and kept draining with hot moist compresses. Antivenin (15 cc.) tetanus antitoxin, antibiotics, and symptomatic drugs were administered. Cortisone (25 mgm. q.i.d.) was started at once. Emesis occurred two hours after admission; at this time a mild generalized urticaria was first evident. The patient improved rapidly and was dismissed on the second day of hospitalization.

Case 5. A 47-year old white female was admitted to Mary Washington Hospital on May 24, 1953, because of a copperhead bite on her left index finger. The injury took place on the day prior to admission. Temperature was 99° F., and the patient complained of a throbbing pain in the left hand. The left hand and wrist were moderately edematous and tender. Initial therapy included the use of tourniquet, and incision and drainage of the puncture wounds. Antivenin (15 cc.), tetanus antitoxin, antibiotics, and symptomatic drugs were administered. ACTH (25 mgm. q.i.d.) was started at once. The patient had a mild course, although repeated nausea and vomiting occurred during the first night. On the second day the dosage of ACTH was halved, and late on the second day the patient was dismissed as markedly improved.

Comment on Grade I Cases

These five cases of venenation are typical of mild localized venenations associated frequently with the bites of small pit vipers like the copperhead, and occasionally with smaller specimens of the larger species such as the timber rattlesnake; cases of mild venenation may be caused by large rattlesnakes. These cases present little therapeutic challenge, and they provided little opportunity to evaluate clinical influence of cortisone and corticotropin except perhaps in influencing the brevity of the urticaria that developed secondary to the injection of antivenin and tetanus antitoxin in *Case 4*. It cannot be shown that cortisone or ACTH accelerated recovery of these patients, but clinical responses indicate that they certainly did not prolong the period of recovery.

It is never provident to presume that a venomous snake of small size, and incapable of injecting a

large volume of venom, is incapable of causing severe venenation. In one case studied incidental to this series a Marine at Quantico picked up a six inch copperhead by the tail "in order to kill it", and was bitten on the finger. In spite of receiving prompt first aid and hospitalization within 30 minutes of the injury, he had a clinical course associated with a Grade III venenation.

If one could presume that severe venenation had taken place in these five cases, and that cortisone or corticotropin had sharply altered the clinical course by reducing morbidity, the response attributed to these drugs would be as remarkable as in the case cited by Cluxton[4]. The invalidity of this supposition becomes evident when one studies the clinical course of patients treated without these substances. In a series of 200 cases recently reported by one of the authors[5], the type of clinical response noted here was frequently found in cases not treated with ACTH or cortisone. As Ellzey[6] sagely pointed out many years ago, "The copperhead—is unquestionably far less venomous than it has the credit of being. It is in fact very doubtful whether the bite of the copperhead is at all dangerous to the life of a healthy adult, and this accounts for the supposed success of so many absurd and useless remedies." Little or none of the excellent clinical response in these five cases of minimal venenation could be attributed to the use of ACTH or cortisone.

Report of Grade II Cases

Case 6. A 5-year old white female was admitted to the University Hospital on July 6, 1953, because of a copperhead bite on the lateral aspect of the left foot. The injury occurred three hours prior to admission; fang wounds were observed on the left foot, and local edema involved the foot and ankle. Temperature on admission was 100.0° F. Initial therapy included the use of a tourniquet, and standard incision and suction of the puncture sites. Antivenin (15 cc.) tetanus antitoxin, antibiotics, and ACTH (25 units per day) were started. The patient was provided bed rest, and the left leg was immobilized in an elevated position with ice bags over the edematous area. The swelling progressed during the first 24 hours of hospitalization; at that time the entire foot and distal half of the leg were markedly distended. The patient continued to have a low grade fever (100.0° F.) until the fourth day, when her temperature returned to normal. The ACTH therapy was continued through the third hospital day, and the patient was dismissed on the fourth.

Case 7. A 5-year old white male was admitted to the Medical College of Virginia Hospital on August 28, 1951, because of a snake bite (presumed to be due to a copperhead) on the dorsum of the right foot. He was bitten one hour prior to admission, and his temperature on arrival was 99.4° F.; he complained of pain. The right foot and leg were markedly edematous on admission. Initial therapy included the use of tourniquet, and incision and suction of the fang wounds. Antivenin (15 cc.), and symptomatic drugs were administered. Cortisone (50 mgm. *stat.*) was injected; six hours later a second 50 mgm. was provided. The cortisone dosage continued the same on the second day. A few hours after admission the patient spiked a fever (103° F.) which gradually subsided during the next 12 hours; the patient was afebrile on the second day. The swelling in the right foot advanced markedly during the cortisone therapy.

Case 8. A 6-year old colored male was admitted to the Lynchburg General Hospital on August 6, 1951, because of a snake bite (probably copperhead) on the left hand two hours previously. Temperature on admission was 100.0° F., and the patient appeared to be in severe pain. A single puncture wound was found in the web space between the thumb and forefinger, and there was marked swelling of the left hand, and moderate edema extending up the arm to the elbow. Immediate therapy consisted of the use of a tourniquet above the area of swelling, and incision and suction over the wound site. The arm was immobilized, and the wound kept draining with wet compresses and ice packs. The patient had a positive skin test for sensitivity to horse serum, and the antivenin was therefore administered at spaced intervals by the "desensitization" method. ACTH was given simultaneously (25 mgm. q.i.d.); antibiotics and symptomatic drugs were also administered. After 24 hours it was possible to discontinue the ACTH; the patient had a smooth hospital course and was dismissed on the third day.

Case 9. A 7-year old colored male was admitted to Lynchburg General Hospital on June 28, 1951, because of a snake bite (probably copperhead) about two and one-half hours previously on the left foot. Admission temperature was 100° F. and the patient complained of pain. A single puncture wound was found on the dorsum of the left foot at the base of the web between the second and third toes; the puncture was surrounded by ecchymoses and marked swelling extended from the foot up the ankle and leg. Initial therapy included incision and drainage of the puncture wound; antivenin (15 cc.) and

symptomatic therapy were started. ACTH (25 mgm. q.i.d.) was started immediately. Six hours following admission the edema was still progressing up the leg, and a second ampule of antivenin was injected. The patient became afebrile for the first time on the third day, and was dismissed on the fifth day with the swelling, discoloration, and pain largely absent.

Case 10. A 13-year old white male was admitted to University Hospital on July 14, 1953, because of a copperhead bite on his left index finger. Temperature on admission was 99° F., and there was a moderate diffuse swelling of the left hand, wrist, and forearm. Tenderness was marked in the anticubital fossa, and absent in the left axilla; pulse rate was not abnormally rapid. Prior to admission the patient had received first aid consisting of tourniquet proximal to the wound, and incision and suction of the fang wounds. Initial hospital therapy included antivenin (15 cc.), tetanus antitoxin, and symptomatic drugs. Cortisone (25 mgm. q.i.d.) was started; the left arm was immobilized, and moist dressings under ice bags were applied over the edematous area. The swelling rapidly subsided, and the patient was discharged as asymptomatic on the fourth day.

Case 11. A 14-year old white male was admitted to Clinch Valley Clinic Hospital on July 10, 1953, because of a copperhead bite one hour previously on his left index finger. Temperature on admission was 99.4° F.; radial pulse rate was 100 per min. The patient was in moderate pain, and there was considerable swelling of the left hand and distal third of the forearm. Prior to admission the patient received first aid consisting of a tourniquet proximal to the injury site, and cruciate incisions through the fang wounds. Immediate therapy consisted of immobilizing the left arm in a dependent position, and the application of cold compresses over the edematous area. Antivenin (15 cc.) tetanus antitoxin, antibiotics, and cortisone (25 mgm. q.i.d.) were administered. On the following day the edematous region had not extended past the elbow; swelling in the forearm and hand had subsided somewhat. During the next two days the temperature remained normal, and the patient was free of pain; he was dismissed on the third day with slight swelling persisting in the left hand.

Case 12. A 38-year old white male was admitted to University Hospital on May 30, 1953, because of a snake bite (species unknown) 15 minutes previously on the first phalanx of the middle finger, right hand. Temperature on admission was not elevated; pulse rate, 72; blood pressure, 115/80. There was local edema and throbbing of the right hand. A single fang puncture was incised, and suction was maintained over the incision for 30 minutes. Initial therapy included injection of antivenin (15 cc.) tetanus antitoxin, antibiotics, antihistaminics, and symptomatic drugs. The swelling rapidly progressed up the arm; the right arm was immobilized in an elevated position, and cold compresses were applied over the edematous area. Cortisone (25 mgm. q.i.d.) was started. Twenty-four hours later the swelling had not diminished appreciably, and a second ampule of antivenin (15 cc.) was injected. There was no elevation of temperature; and no nausea, emesis, weakness, dizziness, or signs of systemic involvement. The patient was dismissed on the fourth day with a slight residual edema of the involved hand. Three days later the patient returned to the outpatient department with the complaint of itching, pain, and swelling of the right arm. He was running a low grade fever, and his arm was erythematous, inflamed, tender, indurated, and edematous; involvement of the extremity was most pronounced in the vicinity of the fang wounds. Treatment of the involved arm including antibiotics, immobilization with elevation, and warm soaks resolved these conditions within 24 hours.

Comment on Grade II Cases

These seven cases are typical of an intermediate clinical response to crotalid venom poisoning in which there is a pronounced local reaction and a minimal systemic one. It is to be noted that the use of cortisone or corticotropin early in the therapy did not arrest the local tissue reaction or the edema; in four of the patients progressive edema persisted for 24 hours. The use of these drugs did not prevent an elevation of temperature to 100°-101° F. in two of the cases, and a spiking fever of 103° F. in the third. Nevertheless, it was the impression of the clinicians attending these patients that there was a distinct reduction in morbidity which justified the use of cortisone and corticotropin in the therapy.

Report of Grade III Cases

Case 13. A 5-year old white male was admitted to Clinch Valley Clinic Hospital on July 5, 1953, because of the bite of an unidentified venomous snake on his right leg ten hours previously. The child was obviously ill on admission, having a temperature of 101° F., and a pulse rate of 120. Two fang punctures were found on the medial aspect of the right leg, and there was marked swelling of the entire

right leg and distal third of the thigh. Initial therapy included the use of tourniquet, incision, and drainage; the patient was administered antivenin (15 cc.), tetanus antitoxin, and symptomatic drugs. Cortisone (25 mgm. q.i.d.) was promptly started, and the right leg was immobilized and kept moist with cold wet dressings. In 24 hours the patient was afebrile, and the pulse rate was 80. There was no extension of the edematous area, and the induration of the leg and thigh was diminished; edema in the distal thigh was now minimal. The patient was dismissed on the third day as asymptomatic; four days later he was again examined, and found to have a slight residual swelling of the right leg.

Case 14. A 7-year old white male was admitted to Lee General Hospital on June 23, 1953, because of a copperhead bite sustained on the left ankle 30 minutes previously. The patient was in profound shock on admission; temperature was 96.0° F. A single puncture wound was present on the inner aspect of the left ankle, and a moderate amount of swelling and discoloration were present in the area. History was obtained that this patient had just returned from an allergy clinic and was known to be extremely sensitive to horse serum. It was felt by the attending physicians that it would be extremely dangerous to administer antivenin or tetanus antitoxin. The alleviation of the shock state was initiated first, with the use of oxygen, blood transfusion, IV fluids, external heat, vitamin K, antihistaminics, ACTH (0.5 cc. t.i.d.), and other supportive measures. Sedatives, hypnotics, and analgesics were administered as soon as the normal blood volume—vascular bed relationship was reestablished. Three hours after admission the patient passed a grossly bloody stool. During the first 24 hours the edema and ecchymoses progressed to the groin, and small petechiae were widely distributed over the other extremities and trunk. ACTH was continued on the second day, and cortisone (25 mgm. q.i.d.) was administered from the third to the fifth day. On the eleventh day the patient was dismissed approximately asymptomatic.

Case 15. A 56-year old white male was admitted to Lynchburg General Hospital on June 18, 1951, because of a bite by a large copperhead on his right thumb two and one-half hours prior to admission. Temperature on arrival at the emergency room was 100° F., and he complained of "severe, excruciating burning pain" in the bitten extremity. The puncture wounds were bleeding, and the hand, wrist, and distal third of the forearm were edematous, indurated, throbbing and tender. A skin test showed the patient to be sensitive to horse serum. He was "desensitized" by the administration of progressively larger fractional doses at 30 minute intervals, receiving ultimately 15 cc. of antivenin. In addition he was given antihistaminics, antibiotics, IV fluids, sedatives, and hypnotics. On the second day the patient developed a typical serum reaction of urticaria and angioneurotic edema. ACTH (10 mgm. q. 4 h.) was started along with antispasmodics, antihistaminics, and calcium gluconate. The serum reaction was rapidly controlled, and by the fifth day the patient had little residual edema; cellulitis developed around the wound site and on the eighth day when the patient was dismissed it appeared that a slough of skin from the involved thumb was imminent. ACTH therapy was continued from the time of the serum reaction to the dismissal of the patient.

Comments on Grade III Cases

These three cases of venom poisoning involved marked systemic intoxication and allergic reactions, and the latter two were certainly life-endangering. In *Case 14* Dr. G. B. Setzler and Dr. H. A. Kinser[7] consider the patient's response to cortisone and ACTH was life-saving, and they add that the amount of tissue destruction was greatly diminished by the use of these drugs. In *Case 15* the ACTH was given credit for playing an important contributing role in bringing the angioneurotic edema and urticaria under prompt control.

Discussion

Cluxton[4] reported that in a single case of copperhead bite treated with ACTH there was "sudden relief of pain" and progressive disappearance of other toxic signs and symptoms following the use of a 40 mgm. injection repeated once, in two hours. His report mentions the use of no other therapy in the management of this patient, but the patient was discharged five hours from the initiation of therapy without any residual signs or symptoms except for the two fang marks. Experience of two of the authors[1] with three cases, and this review of 15 cases, suggests that Cluxton was describing a case where ACTH was not given a clinical trial against appreciable venenation; no such astonishing responses have been noted in this series.

Minton,[8] in personal correspondence, has reported the results of treating snake venom poisoning with ACTH in mice; his findings are that the survival of the mice is in no way improved by the use of ACTH even though his venom injections consisted

of as little as 2 LD 50. He states the ACTH was given at intervals of 10, 15, and 60 minutes after the injection of venom, and the mortality in both controls and ACTH-treated mice was nearly 100 per cent. Thus, he states[9] that he has been unable to show any beneficial effect from the use of this drug. This evidence strongly suggests that cortisone or corticotropin have no specific effect on the snake venoms tested or on the toxic edema fluids produced by these venoms.

In their earlier report, two of the authors[1] stated that following the administration of cortisone remarkable symptomatic relief occurred within a few hours—"The temperature returned to normal, pain subsided, and the general toxic state disappeared. Objectively, the swelling and ecchymosis did not advance significantly, as would have been expected in snake bite."

From the study of the hospital course in the Grade II and Grade III cases reported here it is evident that cortisone and corticotropin in the presence of appreciable venenation are incapable of causing the temperature to return to normal, pain to subside, and the general toxic state to disappear. Furthermore, they will not prevent the edema, induration, and ecchymoses from advancing. These authors[1] further noted, however, that in comparison with the clinical course in a series of 11 cases treated without cortisone or corticotropin, swelling was reduced more rapidly in their three patients. This opinion is shared by most of the clinicians whose cases are here reported.

The effectiveness of cortisone and corticotropin in Grade III cases appears in one case to result from blocking of an anaphylactic response to an introduced foreign protein, snake venom; in a second case it helped control a severe angioneurotic edema resulting from the patient's sensitivity to horse serum. The effectiveness of these drugs in Grade II cases is probably related to the remarkable ability of cortisone and corticotropin to inhibit and alter local tissue reactivity to foreign protein and its symptomatic effects on pain and fever[10]. In one case these drugs were credited with saving the patient's life; in all Grade II and Grade III cases of venenation it was a valuable adjunct in therapy.

Summary

Fifteen cases of snake bite poisoning in which cortisone or corticotropin were used as a part of the therapy are here reported. In cases showing the clinical signs and symptoms of moderate to severe venenation there has been a pronounced decrease in morbidity attending the use of these drugs, and they are regarded as valuable adjuvants in the treatment of this type of venenation.

Acknowledgements

In addition to medical records provided by the hospitals mentioned in this report, the authors received summarized clinical impressions from Dr. C. P. L. Burgwyn, Dr. Lloyd F. Moss, and Dr. H. A. Kinser; discharge summaries by Dr. Frank Gonzalez and Dr. S. W. Burwell were provided by Miss Hester E. White, R. R. L. To all of these persons the authors remain indebted.

Literature Cited

1. Hoback, W. W., and Green, T. W.: Treatment of Snake Venom Poisoning with Cortisone and Corticotropin. J.A.M.A., 152:236-237, 1953.
2. Efrati, P., and Reif, L.: Clinical and Pathological Observations of Viper Bite in Israel. A. J. Trop. Med. and Hyg., 2 (6): 1085-1108, (Nov.) 1953.
3. Jutzy, D. A., Biber, S. H., Elton, N. W., and Lowry, E. C.: A Clinical and Pathological Analysis of Snake Bite in the Panama Canal Zone. A. J. Trop. Med. and Hyg., 2 (1):129-149, (Jan.) 1953.
4. Cluxton, H. E.: The Treatment of the Black Widow Spider Bite and Copperhead Snake Bite with ACTH. Proc. Sec. An. Clin. ACTH Conf., 2:445-448, 1951.
5. Wood, J. T.: A Survey of 200 Cases of Snake Bite in Virginia. A. J. Trop. Med. and Hyg. (In press).
6. Ellzey, M. G.: The Venomous Snakes of the United States and the Treatment of Their Bites. Va. Med. Mo. 11:249-254, 1885.
7. Kinser, H. A.: Personal communication, September 21, 1953.
8. Minton, S. A.: Personal communication, December 10, 1953.
9. Minton, S. A.: Snake-Bite in the Midwestern Region. Quar. Bull., Ind. Univ. Med. Cntr., 14:28-30, 35, 1952.
10. Cortone, A Handbook of Therapy. Merck and Company, Inc., Rahway, N. J., 1952.

Box 3181.

The Diagnosis of Diabetes

WILLIAM R. JORDAN, M.D.
Richmond, Virginia

THE beginning of treatment for diabetes lies in the diagnosis. Typical symptoms of diabetes associated with much glycosuria are strong evidence of diabetes, but patients can lose weight, feel weak and admit urinary frequency of reasonable amounts and a dry mouth without having diabetes. Joslin's criterion of glycosuria related to food intake and abnormal elevation of the blood sugar remains the most reliable standard for the presence of the disease.

With this in view, we decided to review the records of 100 diabetic patients seen recently. Some interesting facts were noted.

Of the 100 patients, only 10 sought medical care for the classical triad of diabetic symptoms—hunger, thirst and polyuria. Yet 80 more admitted having these symptoms or others often produced by diabetes, such as weight loss, languor, weakness, and nocturnal leg cramps. Either the patient earlier failed to consult his doctor about these symptoms or the doctor failed to make the proper urine test to reveal the presence of the disease. In four cases diabetic coma was present before sugar was found.

In 14 cases sugar was first found by routine examination for insurance, work, or school, or by routine health examination. Of these 14, however, 8 had definite symptoms, and only 5 were persons without symptoms.

Many more cases sought treatment for vulvovaginitis, balanitis, foot infections and other local infections; and 12 cases were found when they were seen for intercurrent disease, including childhood diseases, gallbladder disease and even vaginal bleeding. An occasional case is found because of blurred vision as a result of disturbed water balance.

One is justified in making special tests to disclose diabetes in the fifth and sixth decades, since 41 per cent of this group had the onset between the ages of 41 and 60 years. Yet 15 of the group were children 15 years or less in age, and 4 had the onset after passing the age of 70 years. Of course, the high incidence of diabetes in children in this group may be due to the fact that they are usually the most difficult diabetics to control and my special interest in diabetes would make it likely the more difficult cases would be referred to me. For example:

Case No. 2548 was first seen by me the morning when sugar was first found. The baby was 12 months old and was in diabetic coma with a blood sugar of 1560 mgms., and anuria prevailed. The dehydration was severe and arterial blood had to be examined at times because veins could not be utilized. Fortunately the baby recovered. The pediatrician says there probably will be delay in his diagnosis the next time he sees diabetes in an infant if he has to wait for twenty-five years to see his second case, as he did to see his first. In spite of the fact that diabetes is rare at certain ages, one can make the diagnosis easily if urinalyses are done.

That effort must be made to diagnose the disease earlier in its course is indicated by the duration of diabetes before glycosuria is found. Even then there is often considerable delay in diagnosis and treatment. Glycosuria may be found in the preoperative urinalysis before an emergency appendectomy and yet ignored. I have one patient whose previous hospital record showed glycosuria 9 years before his family doctor found sugar and started him on treatment—9 years of delay in treatment. In this group of 100 patients the duration of diabetes as judged by the history was as much as twenty years before surgar was found. In 17 cases no definite estimate of such duration could be made. In one 6 year old girl, sugar was found six days after a definite onset of the thirst, and yet many of the older patients had diabetes for many years before its discovery. Seven cases had symptoms of diabetes from 5 to 10 years and 3 cases from 11 to 20 years before sugar was found.

The data thus far presented show that diabetes can exist in apparently healthy people. They show that many people have symptoms of diabetes which are ignored. They reveal that diabetes is often found by routine urinalysis in people suffering from entirely unrelated disease. The sum and substance of these facts indicate clearly the value of examining the urine for sugar in all people who seek our help. The test is simple and cheap. The proof of the significance of the glycosuria was obtained in every case in this group without the aid of a sugar tolerance test. The best time to take the blood for analysis is immediately after the urinalysis shows

*Presented to Virginia Academy of General Practic , Richmond, Virginia, May 5-7, 1954.

sugar. If that be normal, which is a relative rarity in diabetics, a blood sugar sample the following day one hour after a hearty meal with sweets will usually establish the diagnosis. The fasting blood sugar allows many a mild diabetic to escape diagnosis. Certainly the patient should not be put on a diet or given insulin until diabetes is proven except in cases of extreme emergency. In such emergencies the diagnosis should be established within hours. If such simple rules are followed, the undisclosed diabetic will be a rarity in medical practice.

1631 Monument Avenue.

Child's Deafness May Be "Convenient"

Some children may be like older persons who become conveniently "deaf" when they don't want to hear something.

Steven B. Getz, Ph.D., from the California School for the Deaf, Berkeley, said he has seen several children at the clinic who acted as if they had hearing impairments, but tests indicated there was nothing functionally wrong with their hearing. These children had normal speech, and when an examiner stood 15 feet behind them and whispered the names of objects placed before them, the children quickly pointed to the right objects.

One 10-year-old girl, an adopted child, refused to cooperate at home and frequently said "What? What?" at home and in the classroom. But she quickly answered test questions asked in a normal voice. Her trouble was not with hearing but with "general resistance to intrafamily relations." Deafness in this type of case is "best understood as the mechanism whereby the person excludes, at convenient times, verbal communication."

Dr. Getz described the case in the Archives of Otolaryngology, published by the American Medical Association.

Not "All in the Mind."

Internal illnesses resulting from nervous or emotional disturbances are not just "all in the mind." Actually, these illnesses involve nerve channels from the brain to the internal organs, and can possibly be treated by drugs which slow down or stop the nerves' actions, Dr. J. Earl Thomas said in the January 15 Journal of the American Medical Association.

The "dream" of treating such diseases by medicine alone has not been realized. But it is possible to make many symptoms disappear, in a disease such as duodenal ulcer, to "the great relief or the patient." The brain is "an avenue of communication" between external stimuli and internal reactions, and "confusion in the brain is likely to be communicated to the internal organs." Diseases caused by such errors of function are called "psychosomatic." However, any influence the brain has on the body must come through material channels, the nerves. Thus, these mental-emotional disorders do have a physical basis in the nervous system.

"The idea that the viscera [internal organs] are in some way involved in the major emotions is as old as recorded history." Emotions, like other experiences, are responses to stimuli and may react in the same way as ordinary reflexes. Once a response is made, the next time the same stimulus appears the response returns and eventually may come if the stimulus is only suggested, such as by memory or imagination. The nerve chain involved thus becomes a "path of low resistance."

If the pathways are stimulated often enough in the same way, the conscious emotional response and the unconscious internal reaction may become permanently associated. They appear at the same time. This may result even from the appearance of nothing more than the circumstances usually associated with the stimulus. This fact may explain the seasonal or annual recurrence of a disease such as peptic ulcer.

Assuming that some diseases, notably peptic ulcer and ulcerative colitis, are started or become worse because of overactivity of the nerves, interference with the paths of low resistance should prevent illness. Dr. Thomas said this is possible with drugs which depress the particular nerves involved.

Destruction of Laryngeal Cartilages by High Voltage

HOWARD L. MITCHELL, M.D.
Lexington, Virginia

DURING a storm several years ago in Lexington, Virginia, a limb was blown from a tree, breaking a high voltage transmission line. An electrician was sent to repair the break and, with his ladder against the pole, was splicing the wire when there was a flash. He fell and was partially caught by his helper at the foot of the ladder. In the hospital he was irrational. At times quiet, at others he had to be restrained even after large doses of morphine. This mental condition, which lasted several days, was considered to be due to edema of the brain.

On the inner side of the right arm, just above the elbow, and on the side of the chest, at the same location, were third degree burns approximately two inches in diameter. On the left external forearm, just below the elbow, was another third degree burn about one and one-half inches in diameter.

There were two oval burns, one on either side of the midline of the larynx, (Fig. 1, A & B) The tissues were completely destroyed, giving a punched hole appearance down to the thyroid cartilages which presented a translucent pink crystal appearance. The skin margins were slightly charred. The isthmus of tissue between the burned areas sloughed in about three days.

Later, there appeared white areas in the thyroid cartilages. (Fig. 2.) These areas liquefied in a few days, leaving holes through which he breathed. (Fig. 3.)

Then a very interesting thing happened. The granulating tissues which had begun to form grew rapidly in rolls from the soft tissue margins directly toward each opening. Within a short time all these holes were plugged, so that he did not breathe through them. (Fig. 4.) Other granulating tissue gradually spread over the area, covering the remaining cartilages which gradually dissolved and sloughed. A piece of cartilage nearly an inch in diameter, containing the thyroid notch, was removed in one piece.

There was a sagging inward of the laryngeal walls.

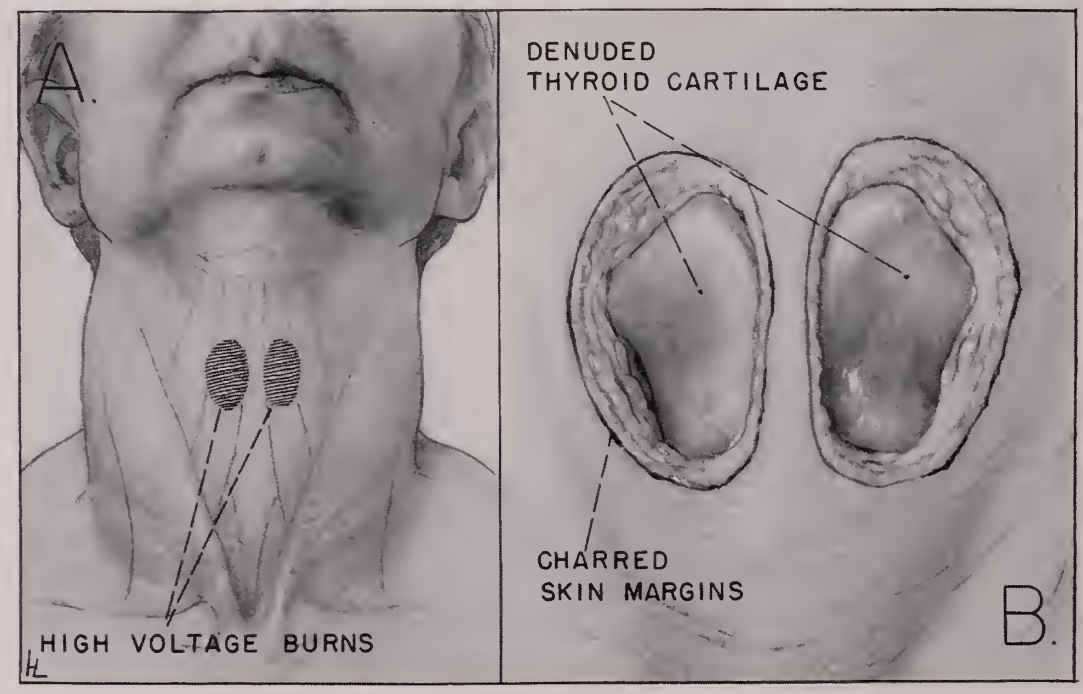


Fig. 1.

Read at the meeting of the Virginia Society of Ophthalmology and Otolaryngology, Old Point Comfort, May 8, 1954.

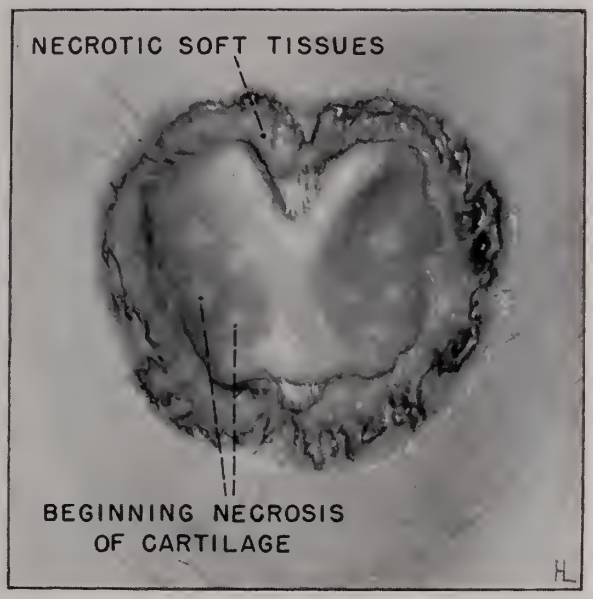


Fig. 2.



Fig. 4.



Fig. 3.

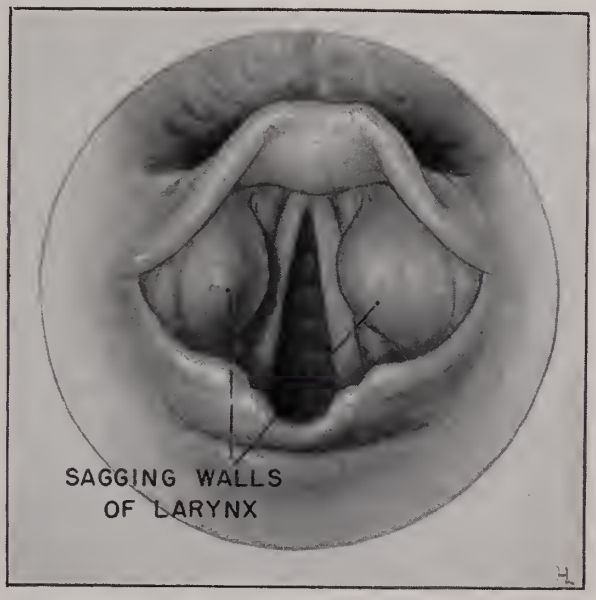


Fig. 5.

(Fig. 5) The voice was husky and the patient constantly cleared his throat. The wound healed finally with considerable scarring. (Fig. 6)

Following two months stay in the hospital, he was X-rayed, with this report: "Practically all the thyroid and aretynoid cartilages have sloughed. A part of the crycoid cartilage has sloughed." Some months later he was X-rayed again with the report: 'All the cartilages of the larynx have apparently reformed." At this time the larynx was firm on pressure with the walls sagging inward, as in Fig. 5)

After the first twenty-four hours he answered questions but later said that he had no memory of any happenings during the first week following the accident.

During his hospitalization he frequently complained of severe headaches, pain in elbows, numbness and tingling of the fingers of both hands with the inability of using his hands. These symptoms improved slowly and finally disappeared. Often he was nervous and restless, requiring a sedative. The voice was hoarse for many months and he continued to complain of having to "clear his throat" often, but there was never any difficulty in respiration.

He returned to his duties as linesman at the end of six months.



Fig. 6

New Drug Stops Severe Hiccups.

Unmanageable hiccups lasting as long as nine months have been stopped almost immediately by a new drug. Drs. Charles E. Friedgood and Charles B. Ripstein reported in the January 22 Journal of the American Medical Association that all but four of 50 patients stopped hiccuping when given chlorpromazine (trade name: Thorazine).

While hiccups may be just a nuisance to most people, in some illnesses they "may progress to exhaust the patient's strength and produce marked depression or even death." One of their patients had been hiccuping intermittenly every day for nine months. After five days of continued hiccups, he was brought to the hospital in an exhausted state. After one injection of chlorpromazine the hiccups stopped immediately. Another patient had been hiccuping for nine days, was completely exhausted. and had to be fed intravenously. His hiccups stopped three minutes after taking chlorpromazine.

The physicians said that if the cause of hiccups cannot be treated, hiccuping may return. Five of their patients had hiccups again, but further treatment reduced their intensity and frequency. Four patients did not respond because the cause of hiccups could not be treated.

Chlorpromazine is a "safe and useful" drug for treating unmanageable hiccups not stopped by other methods. The drug has been used previously to aid in anesthesia and sedation, lower body temperature, quiet mental patients, and relieve severe pain and nausea.

Pre-Operative Consultations in Organic Voice Disorders

JAMES M. MULLENDORE, Ph.D.,
Charlottesville, Virginia

ONE of the prime requisites for the successful management of organic voice disorders is an effective cooperative relationship between medical and non-medical specialists. The purpose of this paper is to report the procedure and results of one aspect of such a relationship with particular reference to the management of two types of problems, (a) vocal nodules, and (b) laryngectomy cases.

This report covers in a general sense some of the cooperative activities of the Speech and Hearing Center and the Department of Otology and Otolaryngology of the University of Virginia over a nine year period. The more specific references to individual cases, however, refer to those individuals examined during the past two calendar years.

Vocal Nodule Cases

It is generally agreed that most cases of vocal nodules are a result, in part at least, of some functional misuse of the vocal mechanism. At the same time, the growths on the vocal folds present an organic aspect to the problem which must be simultaneously considered.

It has been perhaps too often the case that a physician upon discovering the nodules has excised them without consultation of a specialist in speech disorders and, frequently, without even a recommendation for such a referral. We must also assume that speech therapists may have undertaken voice therapy in some nodule cases without previous adequate medical referral. Obviously, neither course of action can be professionally justified. The need for close cooperation becomes even more evident by contrast with such cases where there has been a complete lack of it.

Let us examine, therefore, a few of the reasons why preoperative consultations are important. One of the first advantages of a pre-operative consultation is to alleviate unwarranted fear of the disorder by means of a discussion of the facts of the case and the proposed course of therapy to be followed. Since the post-operative effects of the surgery include a period of silence, followed by a period during which only whispering is permitted, and then, even after the voice may be used, a period during which hoarseness is present and voice training must be instituted, the complete and enthusiastic cooperation of the patient becomes a valuable asset.

During the course of this program a second justification for pre-operative consultations was discovered. It was found that, in cases of comparatively early nodules, vocal retraining alone was sufficient to correct the disorder. Hence, a definitive medical diagnosis together with a thorough analysis of the functional aspects of the case was used to determine whether or not surgery should be undertaken at all, and, if so, at what period of the therapeutic procedure. In our experience, between twenty and twenty-five per cent of the cases responded adequately without surgery, while the remainder appeared to need surgical removal of the nodules prior to the completion of the program of voice therapy in order to achieve satisfactory results.

A third and somewhat more general consideration was studied. It is well know that, in some nodule cases, the exact etiology of the problem is obscure, and many personal and environmental problems may be contributing to the overall impact of the disorder. A discovery and evaluation of the correlative factors appears to be achieved more readily through the cooperative diagnostic approach. To cite just a few examples of the type of problems encountered, one might describe the case of a man who worked in a paper mill as a foreman and whose proximity to loud noise and acid fumes was a major factor in the etiology of the voice disorder. Other cases included individuals who worked in noisy textile mills, and had to shout to be heard during their working hours, as well as still others who were, for one reason or another, chronically in a state of excessive tension. The existence of such problems must be revealed and the correction or alleviation of them is an important part of the overall rehabilitation program.

The effective combination, then, of both medical and nonmedical judgment of the relative effects and importance of the many factors surrounding a voice disorder, such as that produced by vocal nodules, is required for effective translation into therapeutic action. It appears important, then, to establish a close professional relationship between the otolaryngologist and the speech therapist who are willing

JAMES M. MULLENDORE, PH.D., *Associate Professor of Speech and Director of the Speech and Hearing Center, University of Virginia.*

Paper delivered orally in a revised form at the annual meeting of the American Speech and Hearing Association in October, 1954.
Received for publication, November 6, 1954.

and able to work closely and simultaneously, if necessary, with all cases which may have organic aspects. For optimum results, the procedure should include these steps: 1. Medical examination with written report of results. 2. Non-medical (speech) examination and case history, with medical report available. 3. Conference between medical and non-medical specialists, followed by recommendations to patient. Obviously, the key to the success of the procedure is determined by the effectiveness of the third step, and particularly through prior knowledge on the part of the specialists concerned as to exactly what aspects and phases of the problem each will study and treat.

Prospective Laryngectomy Cases

Several additional aspects of the pre-operative consultation procedure may be revealed by an examination of some of the problems encountered in prospective laryngectomy cases. The procedure employed in these cases is somewhat more recent and the method is still subject to some modification and variation. It has been recommended and described in the literature by McCall,[1] Strother,[2] and others.[3] Although the method is similar, it is more difficult to achieve the necessary precision and timing because of the necessity for x-ray and other studies and, of course, the usual urgency for surgery when the presence of a carcinoma has been confirmed.

A significant aspect of this problem is the sometimes violent emotional reaction which obtains, first, when the individual is told that he has a malignancy, and, secondly, when he discovers that he is about to lose what he believes to be his only means of producing the sound needed for speech. It is important that the physician and speech pathologist agree, prior to their interviews with the case, as to what each will tell the patient, and how.

The most obvious, and, in our experience, the most successful, division of labor is to have the physician explain the medical aspects of the problem and reveal the presence of the malignancy. Under some circumstances, the physician may also indicate that the voice will be lost but that it is possible to learn a new way of speaking. More often, however, it becomes the responsibility of the speech specialist to discuss the aspects of the losing of the voice and finding a substitute for it. The most important requirement of this conference is an attitude, on the part of the speech therapist, of confidence that the patient will be able to find the courage and ability to master the new technique. In addition, however, the individual should be shown at least the rudiments of the technique for esophageal speech before losing his true speech if this appears possible and feasible.

In four comparatively recent cases which may be cited as examples, this pre-operative consultation included, in addition to an explanation of the problem involved, from one-half hour to two hours of instruction in the use of the esophageal speech. Two of the cases achieved excellent results during this program and were able to continue with a high level of skill following their surgery and recovery; one achieved partial results in the pre-operative course and maintained this level of ability with only about a one step set-back following his recovery; the fourth case was not able to achieve esophageal speech prior to the surgery during the two hours which were available, and had to start at the beginning of the procedure following his recovery. Of these cases, only the fourth would have to be classed as a failure in therapy since, by the time he had returned home, he had not yet achieved satisfactory esophageal speech.

The number of cases in which actual therapy prior to the laryngectomy has been used are too few in number and the published research too limited to justify any final conclusion. It should be stated, however, that the procedure appears to have promise and justifies further investigation. It would not be fair, however, to make any claim at the moment that this factor alone offers the key to success or failure in the teaching of esophageal speech. It is obvious that there are many other factors involved which may be considerably more significant and important. Furthermore, there are attendant limitations and potential dangers in initiating therapy pre-operatively particularly where unfavorable emotional reactions are present.

Whether or not the pre-operative therapy is performed, however, our experience indicates that pre-operative consultation as a part of the procedure applied to prospective laryngectomy cases may be recommended without reservation. And, in every case, the patient should be referred for speech ther-

1. C. R. Strother (in) Twentieth Century Speech and Voice Correction, ed. by E. Froschels. New York: Philosophical Library, 1948, pp. 306-7.
2. J. W. McCall. Pre-Operative Training for Development of the Esophageal Voice in Laryngectomized Patients. Ann. Otol., etc. St. Louis, 52: 1943, 364-376.
3. For an excellent recent bibliography of articles on esophageal speech, see Bibliography on Esophageal Speech by John O. Anderson in the Journal of Speech and Hearing Disorders, 19: (March, 1954), pp. 70-72.

apy to develop his "new voice" to its optimum level of usefulness.

Summary

To summarize then, I have attempted to illustrate one more phase of the constant and necessary teamwork between the medical and non-medical services available to the speech handicapped, as exemplified in the management of two types of voice problems. In the field of organic voice disorders, such teamwork appears to be particularly valuable and provides a fertile area for effective pre-operative consultation techniques.

Preliminary Report on Lung Cancer.

Researchers have made a preliminary report on a search for a better way to find lung cancer while still curable.

Although the study has not gone far enough for any final conclusions, they already have noted some interesting facts about lung cancer detection.

So far they have surveyed 3,945 men over 45 and plan to study a total of 6,000 for 10 years in the Philadelphia Pulmonary Neoplasm Research Project. The preliminary report was made in the January 29 Journal of the American Medical Association.

There is an "impressive contrast" between detection of curable tuberculosis and curable lung cancer in well-conducted mass surveys. While much curable TB can be found, results are not so good for cancer. Despite emergency action in suspected cancer cases found through official Philadelphia chest x-ray units, surgery could be performed in only 30 per cent of 100 consecutive cases. Since finding cancer while it is still in the operable stage is the only present hope for survival, the researchers said these results made them question the suitability of single x-rays for finding curable cancer.

Their project includes chest x-rays plus examinations and interviews about symptoms and smoking habits every six months. So far they have raised the operability rate from 30 to 46 per cent.

However, referral to hospitals after finding suspicious x-rays or symptoms is still too slow. Seventeen men were operated on out of 37 proved cancer cases, and only 11 survive. The median interval between examination and operation was 55 days for the survivors and 81 days for the six who died.

They said it was important to note that a high proportion of the men studied had some symptoms. The most important were worsening cough and spitting of blood. Others were chest pain, sense of heaviness, weight loss, hoarseness, continued cough, and wheeze.

Important factors in curing lung cancer are detection in the operable stage, promptness in seeking medical attention, adequate and frequent examinations, ability to obtain hospital beds quickly, and surgical skill. Some questions still remain and they hope to answer some of the practical problems through the study.

They also noted that none of the cancer cases found occurred among the 559 nonsmokers included in the survey. However, the number of cancer cases was small and they do not imply "any cause and effect relationship."

The report was made by Drs. Katherine R. Boucot, William Carnahan, David A. Cooper, Donald J. Otenberg, and Peter A. Theodos, and by Thomas Nealon, Jr., M.C., U.S.N.R.

The Medical Society of Virginia . . . .

Report of Delegates to the American Medical Association

The Interim Session of the House of Delegates of the American Medical Association was held at the Hotel McAllister, Miami, Florida, November 29th to December 1st, 1954.

At the opening session several noteworthy addresses were heard. President Walter B. Martin in the course of his remarks declared that "Medicine belongs to the people" and physicians are "merely purveyors" of medical care. Physicians have an obligation to the people that goes beyond their own private practice and into the community. He also emphasized the importance of continued effort to meet the needs of low income and other individuals and groups not eligible for coverage by sickness insurance. National Commander Collins of the American Legion, deploring the conflict between the American Medical Association and the legion over veterans care, urged that the issue be removed from the "area of name calling and propaganda". He proposed a joint legion American Medical Association committee to study the subject dispassionately in the hope of settling at least some of the differences that now exist. This proposal was accepted by the House and later the Board of Trustees named three representatives who will join with a similar number from the legion to compose the committee. Those chosen from the American Medical Association are, Drs. Elmer Hess, President; David Allman, Trustee; and Louise Orr, member of the Council on Medical Service.

Mrs. Oveta Culp Hobby, Secretary of Health, Education and Welfare, presented President Eisenhower's health reinsurance plan, calling attention to the large number of people still not covered by voluntary insurance plans. She held that the reinsurance plan, by which the federal government underwrites losses, is a necessity and that it offers opportunity for self help without subsidy. She was followed by Mr. E. F. Faulkner, an insurance executive who strongly opposed the plan. It is, he said, unnecessary as reinsurance for any sound risk is easily secured from private sources; it would not make uninsurable people insurable, and would inevitably lead to government control of the whole field of health insurance. Judging from the applause following Mr. Faulkner's speech, the House has not changed the position previously taken with regard to government reinsurance.

In a continuing effort to promote and improve medical care, the House approved a 13 member commission, headed by Dr. L. W. Larson, member of the Board of Trustees, to make a comprehensive survey of the various types of plans through which the American people receive medical services. The commission will begin its activities at once and will require at least a year to complete the survey. The subject of Geriatrics received special attention as the House approved a resolution from the Pennsylvania delegation that directs the Board of Trustees to consider the creation of an organization on Geriatrics within the present structure of the American Medical Association. The purpose of such an organization is to make available to local societies, to the profession generally and to the American people such facts and opinions concerning Geriatrics as may be considered of value in meeting and alleviating social and medical problems created by the increasing population of older age groups.

A resolution from the Mississippi State Medical Association requested that the American Medical Association reaffirm its opposition to "Socialized and state subsidized medicine regardless of the form it may assume". Specifically this refers to medical practice by faculty members of tax supported medical schools, a controversial subject in many sections of the country. The reference committee on Medical Education and Hospitals before which the resolution was discussed, recommended that it be referred without approval or disapproval to the Council on Medical Service which is currently studying the various aspects of the subject. This recommendation was approved by the House.

The special committee to study the "relations between Osteopathy and Medicine" has now made final arrangements for visiting and inspecting five of the six existing schools of Osteopathy. It is expected that the committee will, at the June meeting of the House, present its findings concerning the nature scope and quality of education in these schools.

A special committee on internship, headed by Dr. George Klump, made its report which was favorably received and referred to the Council on Medical Education and Hospitals for further study and

guidance. Among other things, the committee recommended a more thorough canvas of the teaching facilities of a hospital seeking approval for internships and also that any internship program which on two successive years does not obtain one fourth of its stated intern complement be disapproved for intern training. In place of an Indiana resolution protesting certain situations that arise in connection with hospital inspections, the house adopted a substitute that requests the joint commission on accreditation of hospitals to supply a copy of the letter of notification regarding the results of the survey of each hospital, to the hospital administrator, the chief of the professional staff and the chairman of the governing board of the hospital.

Similar resolutions from the Colorado and Mississippi delegates asked that a committee be appointed to study and report on recommended standards for the operation of grievance or mediation committees. This request was approved by the House and the Board of Trustees will appoint such a committee.

Two resolutions and a trustee's supplementary report dealt with the problems and difficulties connected with obtaining satisfactory professional liability insurance. The board reported that a study is in progress, the results of which will be reported to the membership through component societies as soon as possible.

Accepting a recommendation from the council on Constitution and By-laws, the House amended section 7 of Chapter 1 of the Principles of Medical Ethics on the subject of patents and copyrights. The section now provides that a physician may patent surgical instruments, appliances and medicines or copyright publications methods and procedures. However, the use of such patents or copyrights in a way that retards or inhibits research or restricts the benefits derivable therefrom is unethical. A resolution that would remove from the code of ethics the provision covering the ownership of drug stores and the dispensing of drugs by physicians was rejected.

Several reports and resolutions concerning the "doctor draft law" were received and discussed. A statement of policy was adopted recommending that the law be not extended after June 30, 1955, and that the Council on National Defense continue to study the problem of providing the best possible medical care for the Armed forces. Also that the Department of Defense be requested to give special attention to the further development of a career Medical Corps with adequate compensation.

Named by a special committee of the Board of Trustees, Dr. Karl B. Pace of Greenville, N. C., was selected as the general practitioner of the year and received the medal and citation presented annually for community service by a family doctor.

At the closing session the American Medical Association was awarded a citation from the National Citizens Committee for Educational television for pioneering to bring educational television to the American public. At the same session, contributions to the American Medical Education foundation of $10,335.00 from the Utah State Medical Society, and $1,000.00 from the Southern Medical Association were announced. Philadelphia was chosen for the Interim meeting in 1957.

J. Morrison Hutcheson, M.D.
Delegate.

Artificial "Pacemaker".

Electrical stimulation on the outside of the chest was used to help maintain a man's heartbeat for seven days. Drs. Albert H. Douglas and William P. Wagner, Jamaica, N. Y., reported the case in the January 29 Journal of the American Medical Association. The 72-year-old patient's heart began to miss beats after numerous attacks of unconsciousness and convulsions. About 18 hours after the attacks started, the man was in a coma and suffering from lack of oxygen in the blood stream. They applied an "artificial pacemaker," and the patient regained consciousness after two hours. During treatment he was able to eat, drink, and perform other functions easily. The pacemaker operates by use of alternating currents from two electrodes placed on the skin of the chest, which stimulate the heartbeat.

Attempts to remove the pacemaker were followed by unconsciousness and imperfect heartbeats, until after seven days they noted several spontaneous beats. The pacemaker was turned off and then removed. Two months later the patient was seen again, walking about, and without symptoms. The only aftereffects appeared to be some skin irritation where the electrodes had been placed.

Medico-Legal Notes . . . .

Acute Coronary Occlusion as a Compensable Disease

From a survey of litigation cases, it is evident that a continuing flow of cardiac cases is going through the courts.

Most of these are workman's compensation cases following lifting, straining, or unusual exertion in the course of work rather than from direct trauma; and most of them are disasters suffered by persons already afflicted by heart disease.

Hence these cases are the result of what has been called indirect trauma.

Further inspection of the law cases shows that a goodly portion of cardiac claims involve some specific stress or strain out of the ordinary, followed by speedy collapse of the workman. If the subject dies within seconds or minutes thereafter, the cause-effect relationship is more easily established. If, on the other hand, the collapse at work is followed by a period of weeks or months before the appearance of the final injury imputed to be the stimulus, very serious problems of proof exist.

According to Moritz, perhaps the foremost medicolegal authority on the subject, coronary arterial disease is the most common cause of a diminished myocardial reserve.

He also states that a severely diseased heart may be capable of providing an adequate circulation so long as the load placed upon it is not excessive.

The sudden failure of a diseased heart usually occurs independently of any known augmentation in work load and presumably as the result of a spontaneously occurring progression of the disease process, as for example the development of edema or hemorrhage into an atheromatous plaque or the enlargement of an already formed thrombus.

It may also fail because an intolerable work load has been placed upon it and not because of any change in the extent of severity of the disease.

But the sudden onset of heart failure in coronary disease usually occurs spontaneously, and during a period of rest or average activity. In other words, unusual stress or exertion is not a prerequisite to the sudden failure of the diseased heart.

According to Lewis and White, it is generally believed that physiological overwork is incapable of causing injury to a normal heart.

Contributed by: Francis J. Januszeski, M.D., Fellow in Legal Medicine, Medical College of Virginia; Medical Examiner, City of Richmond, Richmond, Virginia.

The 1950 Code of Virginia defines "injury" as follows:

> Unless the context requires, "injury" and "personal injury" mean only injury by accident or occupational disease as hereinafter defined, arising out of and in the course of the employment and do not include a disease in any form except when it results naturally and unavoidably from either of the foregoing causes.

The court has said that the possibility of a relationship between an injury and the disablement is not enough. Mere exertion which is not greater than that ordinarily incident to the employment but which combines with pre-existing disease to produce disability is not compensable as an "accidental injury".

But the court does liberally construe the term, "accident", so that extraordinary physical stress or strain, or nervous shock, *not normally* incident to the employment, is considered to be an "accidental" cause of any resultant injury.

While we have been dealing mainly with indirect trauma thus far, we must also take into consideration direct trauma. Direct trauma, as used here, refers to heavy impact injuries to the overlying intact thorax. Direct trauma over the heart causing coronary thrombosis is not a reasonable attribution unless there is positive evidence that the segment of the vessel containing the thrombus was in the region of injury. Moreover the character of the thrombus should correspond with the duration of the interval between injury and death (Moritz).

Reports of myocardial anoxia due to trauma are rare in literature. There has been one such death among the twenty-one thousand recorded during the past three years by the Medical Examiners in the State of Virginia.

In conclusion, in any case appearing before a doctor in which there is evidence of myocardial anoxia and a history of injury, he must consider all the above named possibilities.

He must also keep in mind that the court has said repeatedly, "The Workman's Compensation Act was adopted for the benefit of the employees and their dependents; that it should be liberally construed in order to accomplish this human purpose. But liberal construction does not mean that the act should be converted into a form of health insurance."

Notes On Pulmonary Tuberculosis . . . .

Modern Therapy VIII
Can Tuberculosis Really be Cured?
Factors Which Influence Termination of Treatment (A)

Today the public is being informed *on every hand* that "tuberculosis is curable", a sentiment with which the Virginia State Health Department is entirely in accord. Increasing knowledge about tuberculosis *as a disease,* combined with modern available treatment potential, leaves little doubt but that patients with active pulmonary tuberculosis can be *clinically cured* in ever increasing numbers, and that more and more of these will be restored *completely* to their respective pre-illness levels of living.

Whenever a disease is accepted as curable, a definite *time limit* for specific therapy is implied. Most people do not regard as "curable" any disease that requires treatment for the balance of their lives, however grateful they may be for long periods of symptomatic relief, associated in many instances, with increased life span, produced by perennial therapy.

Clinical Cure Defined. Clinical cure as applied to pulmonary tuberculosis is, of course, *not* synonymous with "pathological cure", contingent as the latter would be, in important part, upon liquidation of the last Tubercle Bacillus from within the body, in each instance. Nor does clinical cure mean that a patient can "burn the candle at both ends". He cannot, for example, lead two lives safely, *at the same time,* for an extended period. Many ex-patients discovered this to their sorrow during World War II by attempting to work *both* the "swing" and the "graveyard" shifts in industrial plants operating around the clock. Generally, such lives are not considered "normal".

Most ex-patients will gladly settle for "recovery," as defined by an ability to lead a perfectly normal life (like millions of other people), with negligible risk of relapse, without need for exercising any precautions whatever to prevent spread of infection, and with no formal rest periods or other specific antituberculosis therapy prescribed or taken.

If a man, the former patient can plan to earn a living in an occupation identical to that which supports thousands of healthy normal families; he can marry and raise a family. If a woman, she can bear children; her home life will be virtually indistinguishable from that of other housewives.

In moderation, both can do *practically* everything their friends do, even "dissipate" occasionally—and finally die of old age, or of some condition other than tuberculosis. The autopsy might show a few encapsulated caseous nodules containing viable Tubercle Bacilli—but who cares?

This is surely a *practical* goal worthy of great effort and much sacrifice to attain. The potentially curable patient should be encouraged to strive for nothing less.

However, even today unfortunately, it must be acknowledged that not all curable cases can be restored wholly to their pre-illness physical status. Advanced disease too often leaves in its wake varying degrees of partial permanent disability; the patient must adjust his post-illness level of living to correspond.

It has been suggested (see October issue, Virginia Medical Monthly) that, *for practical purposes,* formal rest periods, as well as other restrictions placed upon pre-illness life patterns, might best be looked upon by the general practitioner, as prescribed in tuberculosis, for one of three reasons: (1) Ultimate clinical cure (complete); (2) Long term "control" (of clinical or subclinially active disease), (3- to compensate for partial *permanent* disability (*resulting from* tuberculosis).

The simple way, perhaps—indeed, the *key*—that would enable one to differentiate between what may be regarded as "treatment" for active tuberculosis and what can be accepted as "compensation" for partial permanent disability resulting therefrom, would be to ascertain *the intent* with which each is prescribed by the attending physician. By analogy, the only way one could possibly establish whether a leg-brace was being worn for "treatment" or for "disability" would be to determine the circumstances relating to its application. As is well known, an *identical* brace could be prescribed for *either* reason —or initially could have been applied for completely curative purposes, but—*failing that*—was later retained to compensate for what eventually proved to be a permanent weakness.

When a tuberculous patient is advised to acquire a less strenuous occupation by which to earn a living; when a professional skater is told he must *never*

*Prepared by the Virginia State Health Department.

perform professionally again (but otherwise, may lead the same life he did before his illness); when a patient is instructed to take ten hours sleep each night (instead of a pre-illness eight) *for the balance of his life*—at that point—it would appear that his physician has acknowledged (to himself, at least) that *complete* restoration to a pre-illness level of physical status is not likely and/or is not medically feasible, *even after* all evidence of clinically active disease has, or shall have, disappeared, and after due allowance has been made for the healing of residual sub-clinically active disease. *At that point,* what had formerly been but a part (indeed, may still be a part) of the patient's treatment regime, is formally ear-marked, *in perpetuity,* as compensation for partial *permanent* disability.

This over-all approach or "working hypothesis" has the advantage of making possible a clean-cut distinction between what is therapy for tuberculosis and what is not therapy, in the ordinary sense of the word. It is consistent with and supports the contention that, by and large, "tuberculosis is curable"—that the adage "once a tubercular—always a tubercular" need not apply at all to ever increasing number of patients—either from the standpoint of seeming endlessness of "treatment" as such, or from the standpoint of an ever-present *real* danger of relapse. This would apply whether the patient, upon recovery, can return almost literally to his pre-illness level of living, or whether he cannot do so, *provided,* in the latter instance, he adheres closely to his prescribed post-illness standard of living imposed by his partial permanent disability.

Considered from this point of view, need for such vague and poorly defined terms as "preventive treatment" would seem to be abolished, for in the absence of clinical or sub-clinically active disease, or an anticipated excessive exposure to super-imposed exogenous re-infection, there would really be nothing to "prevent", in the usual sense that *this* term is used in medicine.

A *patient* can readily understand why advanced pulmonary tuberculosis, upon healing, might confer a partial permanent disability—even though the disease itself is curable in that no clinical or sub-clinically active disease (requiring treatment) remains. It might be more difficult to reconcile a need for *perennial* "treatment" for a disease which is "really curable" (with or without sequelae)—since the word "cure" implies that the disease is truly inactive—*no longer in need of treatment* "preventive" or otherwise. (see September and October issues, Virginia Medical Monthly). Use of the *term* "treatment" past that point can only add confusion and uncertainty to a field already sufficiently complex as to justify every reasonable effort to simplify and clarify elementary concepts in the interests of clearer thinking.

Factors Which Influence Termination of Treatment. Systemic rest regimes of curable tuberculous patients, treated successfully during the clinical phase of their disease, are punctuated by periodic decrements in the amount of rest prescribed during this phase whether or not the patient is the recipient of collateral therapy. According to conventional practice, this pattern is usually followed throughout the remainder of the patient's treatment "career", or until such time as systemic rest periods, prescribed with therapeutic intent, are discontinued altogether, and the patient returns to his pre-illness, or prescribed post-illness, standard of living.

Unfortunately, during the period between total disappearance of all tangible evidence of active disease, and complete restoration to normal living, or restoration to whatever modified life pattern may have been selected to compensate for partial permanent disability, there are no criteria by which to judge when lesser amounts of *rest* may safely be prescribed. There is no way to follow the course of sub-clinically active disease, for the patient is already symptom free; physical examination shows no indication of active disease; the x-ray has previously reached a point where persisting lung shadows, if any, have been declared to be "compatible with a healed lesion"; and such laboratory tests as have been made, are negative—no Tubercle Bacilli found.

Accordingly, analysis of treatment needs during the *sub-clinical* phase must be based upon what is *already known* about the original or maximal *extent,* the total *duration,* and the observed *course* of the disease, during its *clinical* phase, in each individual patient:

(1) *Extent and Intensity of clinical disease at time of diagnosis* (or at its height).

How sick was the patient? The tuberculous individual who was *twice* as sick initially, as his neighbor, would exemplify a factor which in and of itself (everything else being equal) would tend to prolong the total period of treatment for the ensuing sub-clinical phase. This conclusion is based upon the seemingly legitimate assumption that the *impact* of the disease upon his system would naturally have been greater than it would have been upon another who

had had only *half* as much involvement (provided all other circumstances were comparable). A person who has been extremely ill from influeneza is usually not permitted to get up and about as soon, following abatement of symptoms, as is the patient who has suffered a much lighter attack.

(2) *Duration of Clinical Disease.*

How long has the patient been sick? A patient who has had even minimal tuberculosis for *two years* (instead of two months) can naturally be expected to require a much longer period to heal *thoroughly* residual subclinically active disease. *Chronically established* infections of all types are notoriously more difficult to eliminate *completely* than are those more recently acquired (syphilis, malaria, amoebiasis, etc.). While no attempt is made to completely eliminate infection in treatment of tuberculosis, the same principle could apply to the *relative* difficulty to be anticipated in achieving *lasting clinical cure* in the person who has already had the disease *for a long time.* This circumstance, therefore, would, in and of itself, appear to call for an extension of the total duration of treatment directed expressly at the sub-clinical component. When the patient has exceptionally good native resistance, as he usually does when the disease is not extensive but of long duration, the temptation, of course, is to be satisfied with "control", by treating each successive exacerbation or "flare-up" (*clinical* reactivation) as it occurs. Unfortunately, each needless exacerbation, often mislabelled "relapse", provides another statistic to help "prove" that tuberculosis is a "chronic relapsing disease".

(3) *Course of the Disease Under Treatment*

How did the disease respond to treatment? Time wasted on catch-as-catch-can therapy sheds *comparatively* little light upon the patient's real capacity to heal tuberculosis *completely,* although it must be conceded that the degree to which a patient has demonstrated an ability to resist rapid deterioration under unfavorable conditions does provide a rough measure of his inborn resistance to the disease. Unfortunately, haphazard or inadequate treatment always adds to the total *length of time* the patient has been sick, and would be accounted for under the heading of *Duration* (see above).

Once *proper* treatment was instituted, did the patient's symptoms whether mild or severe subside rapidly or slowly? Did objective physical and x-ray evidence of activity disappear (regardless of the total lung *area* involved) in a few months or did it take a year or more? *How long* was required to convert his sputum (from "positive" to "negative")? Whether or not unduly long drawn out, was his clinical improvement uniformly smooth or was it characterized by one or more acute or semi-acute complicating episodes, such as pleurisy with effusion?

Since one is dealing with the *same* patient for the *same* disease throughout its sub-clinical as well as clinical phase, it would appear reasonable to suppose that, if the clinical course was "stormy", the subclinical course might be correspondingly "hectic", were it suspectible of objective demonstration; at least this might well be acted upon as though it were an established fact when planning a treatment program for the sub-clinical phase of active disease.

In order that the importance of adequate treatment for sub-clinically active tuberculosis may not be overlooked or underestimated, it is suggested that the general practitioner regard this often neglected field as a distinct entity—*in its own right*—for which treatment should be *specifically* prescribed, the same as for clinically demonstrable active disease. *When this is done,* appropriate interest upon the part of all will automatically be concentrated upon the *immediate* post-clinical period where there has long been a tendency to liberalize rest schedules *too* radically *too* soon—a trend that has proven extremely costly to many patients.

Operation PR Action

The ABCs of medical public relations are neatly spelled out in AMA's new "County Medical Public Relations Manual." Prepared by the Department of Public Relations as a working manual for county medical societies, this booklet comprises the first comprehensive textbook on medical PR. The Manual explains how to organize for PR action, outlining dozens of PR projects which local medical societies can conduct to win the respect and confidence of the community. State medical societies have received a supply of Manuals for distribution to county PR leaders.

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

Operating Farms at the Mental Hospitals in Virginia

The business of farming, in the Department of Mental Hygiene and Hospitals, is as old as the oldest institution. The State of Virginia has used sound judgment and has, as a policy, purchased quite large tracts of land adjacent to the various institutions. Since this land is owned by the State, it follows that the most practical and economical way to properly maintain and improve the land is through a well planned farm operation. Most of the institutions have added land to the original grant for the institution. Little, if any, of this land was purchased purely for the purpose of farming. Rather it was purchased for self-protection, to keep the normal growth of towns, industrial areas, etc., from encircling the institution and preventing expansion of the institution. But regardless of why or how the land was obtained, it has been in the past and is now advisable for the State to make practical use of it. It is obvious that the upkeep connected with the land would be a burdensome expense unless some income can be realized from farm commodities.

Thus we see that a farm seems to go hand in hand with the normal institutional set-up. We find this true in all of the states in the United States, as well as Virginia. There are, of course, many other reasons as to the why of farms in connection with mental institutions, some of which will be mentioned briefly in this discussion.

Location and Extent

There are six farms that are operated as a part of the hospitals and training schools which they serve. Excluding the land for campus buildings and grounds, but including all other, these farms have a total acreage of 6,580. Of this amount, approximately 3,720 acres are used for crops and pasture. The farms are located as follows: Eastern State Hospital, Williamsburg; Central State Hospital for colored, Petersburg; Western State Hospital, Staunton; Southwestern State Hospital, Marion; Lynchburg Training School and Hospital, Lynchburg; and Petersburg Training School and Hospital for colored, Petersburg. In addition, the Department has an undeveloped tract of land, consisting of 2,300 acres, in Henrico County. Some of the utilities have already been completed on this tract and an institution for colored mental defectives will be developed as money is made available. As has been the practice at other institutions, it is felt that a portion of this land will be developed for farming.

The following figures from the Annual Report of the State Hospital Board for the year ending June 30, 1953, indicate the extent of the combined operation of the six farms:

1. Gross income, $552,245.53—of this amount $405,026.27 was credited as food consumed by patients. The remainder of the gross was as feed produced and products sold for cash.
2. Net profit for the year was $60,317.00.

Some Considerations

The State Hospital Board and Dr. Joseph E. Barrett, Commissioner of the Department of Mental Hygiene and Hospitals, are among those who see many advantages of having a farm connected with each mental institution. Although it is true there are many advantages that we all see, at the present time we, basically speaking, use only the economic factor as a justification for operating farms. This is perhaps as it should be, but there is a danger in this attitude as the farms should also be operated for the best interest of the patients. Those who are in charge of farm operaions must never become so "dollar" conscious that they lose sight of the fact that the farm exists only for the service it can render the institution whose primary purpose is the care of mental patients. Using this point of view we, who are charged with details of farm management, seek to operate the farms using wise management practices so long as these practices do not interfere with that which is best for the patients, though some difficulties do occur, for example, milking hours are not always spaced properly due to inconvenience it causes patients who work in the dairy. Another good example is found in using toxic materials to poison insects. Many times we back off from recommended materials when we think the well-being of patients

Article prepared by Paul S. Keyes, Farm Co-ordinator, Department of Mental Hygiene and Hospitals.

is in danger. In view of the relationship which an institutional farm has to patients, we are, of course, proud that we do show a profit, but we are more concerned about the overall service the farm renders the institution than we are the cold dollar and cents profit angle.

In any discussion of institutional farms, the question of therapeutic values of farm work must receive attention. Though not being an authority on this subject, certain facts have been obtained from observation in that physicians and others familiar with the treatment of mental patients do not doubt the value of farm work as a therapeutic aid even though only a limited number of patients can work on a farm. As modern machinery increases, the number of patients that can be properly used decreases. These considerations are, of course, unfavorable to the farm as a therapeutic aid. In the face of these facts, however, the six farms in the department regularly do their part in the field of therapy for approximately 150 patients each work day during the year. Most of these patients enjoy farm work and many of them show displeasure, in no uncertain manner, if they are prevented from going to the farm to work.

Plan of Operation

With one exception, each farm operates under a farm manager, who is in charge of the entire operation and is directly responsible to the Superintendent or the Steward of the institution. The exception noted above will eventually be on the same basis. All farms are actively engaged in a soil conservation program under supervision of the local Soil Conservation Supervisor in the respective communities. Farm managers regularly consult their County Agricultural Agent concerning all phases of farm operation. In addition, the managers, herdsmen, and other employees attend short courses at Virginia Polytechnic Institute and area schools put on by specialists from the Agricultural Extension Division of the School of Agriculture at Virginia Polytechnic Institute.

All persons in this Department, who concern themselves with operating farms, feel that it is wise and proper to keep the farms in close touch with the State College of Agriculture and its various agencies. If we keep abreast of the latest and best proven methods recommended by our State Agricultural College, who can doubt that we will be successful? We realize that these farms are operated in the interest of every citizen of the Commowealth. If we stick closely to proven methods recommended by our own College, we doubt that any citizen can be justly critical. We do not infer these farms should be experimental or even a proving ground for experimental work, but rather they should be up to the minute in using worthwhile practices that have been proven by experimental work. By so doing, we do not expect to eliminate all mistakes, but we contend that this is the road of least error. The same is true as applies to the Virginia Department of Agriculture. Here is another State Department that has many branches and many employees that are able and willing to help farmers solve various problems.

It is a pleasure to report that all plans are complete for the first School for Institutional Farm Workers in Virginia. This school is to be put on by Extension Specialists from Virginia Polytechnic Institute and will be held on March 15th at Charlottesville.

The largest and most important enterprise on the several farms is dairying. All farms have a dairy, with the exception of Central State Hospital Farm at Petersburg. The milk produced comes entirely from Holstein Cows and is as good as the best. All milk is pasteurized and delivered in bulk to the point of consumption. All dairies are regularly inspected by a representative of the Dairy and Foods Division of the Virginia Department of Agriculture. The cows, buildings, and equipment meet specifications for grade A milk.

All herds, with one exception, use artificial insemination. The exception is the small herd at Petersburg Training School and Hospital where, at the present time, an inseminator is not available.

All herds are on the recommended disease control program including calfhood vaccination for bangs, and regular testing for bangs and T. B.

Three of the herds are purebred, one herd is purebred and grade, and one herd is made up entirely of grade animals. The aim is to eventually have all animals purebred, but there is no inclination to dispose of any grade animal as long as she is a good producer.

Swine ranks second in order of importance. As in the case of milk, the quality of pork produced is excellent. All farms produce pork and garbage is used as the principle feed. Our plan of improvement is based on careful selection of purebred boars and using them on the best sows in the herd. Control of internal parasites is the biggest problem we have at present. We are making some progress toward satisfactory control of internal parasites on three of the farms and one farm already has an excellent control program.

Other enterprises produced for food are vegetables, beef and poultry. These enterprises are large on some of the farms but do not make a large percent of the aggregate income. Vegetable production is important at Eastern State and Central State; poultry is produced only at Central State; while Southwestern State is the only large producer of beef. The quality of eggs, poultry and beef is excellent. Our vegetables are as good as any ungraded vegetables, and are priced as "Farm Produced Ungraded".

Generally speaking, products are priced considerably below the prevailing market. Milk is a good example: we get $.55 per gallon for grade A Pasteurized milk delivered in bulk. The market price at present for the same product is above $.80 per gallon.

Farms in our Department are regularly turning in products that have a gross value of over $550,000.00. This figure can be increased if prices remain the same, but the present figure is a sizable business that justifies careful study and planning. We can point with pride to the overall service the farms have rendered in the past. There are improvements needed now and the future will uncover more. Our job and our goal is to recognize the needs and to use all available means to satisfy them as soon as possible. To this end, we are dedicated.

Ordinary Baldness Can't Be Cured.

The first known written medical record contained a remedy for baldness, including fat from the lion, hippopotamus, crocodile, goose, serpent, and ibex. It had one thing in common with modern "cures." It also failed to cure baldness.

One of the reasons baldness "cures" have continued to appear for thousands of years is that baldness is a "mysterious condition about which people can be easily fooled," according to Veronica L. Conley, assistant secretary of the American Medical Association Committee on Cosmetics. Another reason is that it is the kind of problem that breeds quackery, she said in the January Today's Health magazine, published by the A.M.A. The "pseudoscientific arguments supporting most baldness cures" are frequently "so convincing that their unsound basis can be detected only by trained scientists." For instance, "before and after" pictures of bald men whose hair grew again after using a "restorer" are among "the most potent advertising weapons."

The trouble is that in many types of baldness, hair will return regardless of treatment or lack of it. This type of baldness and "spontaneous regrowth" often follows infectious diseases accompanied by fever, including erysipelas, pneumonia, typhoid, and influenza. Serious hair loss sometimes follows childbirth or surgery. In all these conditions, normal hair growth returns without help. But for ordinary baldness, massage and hair tonics with or without vitamins, hormones, ultraviolet light, diets, sulfa drugs, and antiseptics have "no special place" in treatment. A complete physical examination to discover a possible cause in disease is wise. Regular and gentle scalp massage, brushing, and intermittent tugging at the hair to lift the scalp are "measures for good scalp hygiene." However, once ordinary baldness gets under way, "it is progressive and permanent and there is no known way of preventing or retarding its progress." The tendency toward baldness is hereditary but will appear only where there is a normal amount of male hormone.

Scientists are mostly optimistic about an eventual solution to the problem of baldness, except for one factor.

"In the course of evolution there has been a marked reduction in the amount of hair covering the human body." "The loss of scalp hair may be part of an evolutionary trend. If this is true, future centuries will bring not a cure but the appearance of more and more bald men."

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Measles

It is inevitable that every individual will be exposed to measles. With modern methods of travel and with isolated spots in the world no longer found, it is unlikely that conditions will again exist that prevailed in the Faroe Island in 1846. Measles had disappeared from these Island in 1781 and there had been freedom from the disease for 65 years. In 1846, an individual who had been in contact with a case of measles a few days before leaving Copenhagen, landed on the Islands and several days later, the fourteenth after exposure, developed the disease. An epidemic resulted, during which a number of observations were made:

The period of incubation is usually 13 to 14 days.

All ages are susceptible.

One attack produces immunity.

This disease may be transmitted during the prodromal period and before the appearance of the rash, but is most readily transmitted at the time of development of the eruption.

In the epidemic on the Faroe Islands there were people alive who had had measles 65 or more years previously; not one of these was attacked the second time. Although second attacks have been reported, they are extremely rare.

Measles is prevalent in greatest numbers in the late winter and early spring months and is at its lowest level during the late summer months. Peaks or epidemics may be expected every two to three years. As people have the disease they enter the immune group and the number in the susceptible group falls. The increase in the immunes acts as a damper to further spread. The build-up of the susceptible group then goes on by the admission of susceptibles moving into the area and being born into the group and another peak or epidemic results.

An infant has an immunity from infection during the first few months of life that is acquired from its mother, provided she has had measles.

Because of the inevitability of exposure it is not desirable to prevent measles except in those under three years of age or in children whose poor health makes them bad risks for any infectious disease. Preventive measures are directed to the reduction of the frequency of complications and of death. Such measures are available through the administration of convalescent serum or of gamma globulin.

Following an attack of measles the blood of the patient is rich in immune bodies that are able to neutralize the virus of measles, and convalescent serum obtained between the 10th and 30th days is most effective. Five cc. of convalescent serum for a child and 10 cc. for an adult, if given intramuscularly by the fifth day after exposure, will usually protect the patient for about three weeks. If given between the fifth and eighth days of exposure, the serum will modify the disease rather than protect against it. Modification prolongs the incubation period to 17 or 18 days and reduces the severity of the attack.

In recent years the production of gamma globulin from blood collected from donors all over the country has afforded a new approach to the prevention and modification of measles. The gamma globulin is purified and concentrated, and the antibodies against measles are present in a vastly greater concentration than in the original plasma. A dose of 0.1 cc. of gamma globulin per pound of body weight will usually prevent infection with measles when given promptly (within four or five days) after exposure. For modification, a dose of 0.02 cc. per pound of body weight will modify the severity of the disease if given within four or five days after exposure. It is emphasized that modification is desirable for healthy children over three years of age. If too greatly modified it is questionable whether the protection resulting is durable.

Attention is called to the fact that some gamma globulin is labeled "Immune Serum Globulin (Human)" and some "Poliomyelitis Immune Globulin (Human)." While all of it is effective in measles, only that which is labeled "Poliomyelitis Immune Globulin (Human)" has been tested for its efficacy in the prevention of poliomyelitis.

During an epidemic it is not advisable to close schools or discontinue classes. "The Control of Communicable Diseases in Man" calls for the "daily observation of children and of other possibly exposed persons, by a physician or nurse. This observation should include a record of the body temperature. A non-immune exposed individual exhibiting a rise

of temperature of 0.5°C. (0.9°F.) or more, should be promptly isolated pending diagnosis." A non-immune person presenting symptoms of coryza or cold should likewise be isolated pending diagnosis.

Monthly Report of the Bureau of Communicable Disease Control

	January 1955	January 1954
Brucellosis	0	0
Diphtheria	2	7
Infec. Hepatitis	162	506
Measles	353	969
Meningococcal Infections	7	14
Poliomyelitis	0	3
Rocky Mt. Spotted Fever	1	0
Streptococcal Infections (Including scarlet fever)	755	610
Tularemia	1	11
Typhoid Fever	4	3
Rabies (In animals)	61	30

Air Tour to Europe.

Final arrangements for the A.M.A. pre-convention and post-convention tours to Europe this June have been consummated by United Air Lines.

These air tours are sponsored by the American Medical Association and operated by United Air Lines in conjunction with Thomas Cook & Son, and have been arranged to precede and follow the annual meeting at Atlantic City, June 6-10. Physicians and their wives have a choice of four itineraries, each of four weeks' duration.

Departures from New York are scheduled for May 6, May 8, June 11, and June 13. Deluxe air service will be provided by Air France, British Overseas, K.L.M., Royal Dutch, Pan American, Sabena Belgium, Scandinavian Airlines and Swiss Airlines.

Those departing on May 6 will return to New York on June 3. Those departing on May 8 will return June 5. Both groups will be back on the East Coast in time to attend the Atlantic City meeting. The post-convention tours will depart on June 11, returning July 9 . . . and June 13, returning on July 11. The same itinerary is included in all tours. The countries visited are: England, France, Italy, Switzerland, the Netherlands, and Germany.

In addition to sojourns in capital cities and renowned "old world resorts," the tours will include medical meetings in London, Paris, and Zurich, at which time European scientists will lecture. Concurrent with these medical meetings, style shows will be presented in these cities and in Rome for the physicians' wives who will be on the tour. Among the cities to be visited on the tours are: London, Amsterdam, Haarlem, The Hague, Coblenz, Frankfurt, Zurich, Lucerne, Milan, Venice, Florence, Rome, Genoa, Monte Carlo, Grasse, Nice, and Paris. Continental transportation will be on the surface in motor coaches, a Rhine steamer, gondolas, and the luxurious "Blue Train" between Nice and Paris.

The cost of the tour has been reduced to $1,598, which includes round trip transportation, all enroute meals, and hotel accommodations. A deposit of $100 is required at the time of booking. Requests for booking and additional information should be addressed to American Medical Association Convention Tours, United Air Lines, 5959 S. Cicero Avenue, Chicago 38. Checks should be made payable to United Air Lines.

Woman's Auxiliary . . . .

President—Mrs. Maynard Emlaw, Richmond
President-Elect—Mrs. Mervin W. Glover, Arlington
Recording Secretary—Mrs. J. W. Carney, Newport News
Corresponding Secretary
Mrs. Levi W. Hulley, Jr., Richmond
Treasurer—Mrs. William C. Barr, Richmond
Publication Chairman—Mrs. Wm. S. Grizzard, Petersburg

State Health Week

March 21-27, 1955 has been set as the week during which the public is to be informed of the available community health resources, and our National Auxiliary Public Relations Chairman, Mrs. R. M. Reynolds, of Norfolk, has suggested that all auxiliaries in the forty-eight states, the District of Columbia, and the territories of Alaska and Hawaii use this week as a time to inform their own communities of these free health services.

To this end, your President, your State Public Relations Chairman, Mrs. Eugene Grether; the President-Elect, Mrs. M. W. Glover; the National Public Relations Chairman, Mrs. Reynolds; and Dr. Charles L. Outland, the Chairman of our Advisory Council, called on Governor Thomas B. Stanley on January 20, 1955, to request him to add important significance to our project by making a proclamation or issuing a statement naming March 21-27 as STATE HEALTH WEEK. This he has done as illustrated in his signed statement shown here.

Mrs. Grether, our State Public Relations Chairman, has coordinated a program for observance enli ting the cooperation of the Virginia Junior Chamber of Commerce, the Virginia Council on Health and Medical Care, the Virginia Division of Safety and State Highways, the Virginia Congress of Parent-Teacher Associations, the Virginia Graduate Nurses Association, the Virginia Health & Accident Association, as well as the volunteer health agencies in the State.

County Auxiliary presidents and PR chairmen have received detailed instructions from Mrs. Grether and are asked to plan now to make State Health Week an outstanding success. All plans are to be cleared through the local medical societies and their help should be sought in making this a combined Medical Society-Auxiliary project, if possible. Free diabetic detection clinics and TB chest x-rays are among the suggestions which might be considered.

Posters advertising the week as State Health Week should be placed in local store windows and a poster contest in this connection might be planned in the local schools.

This is our opportunity to render a real public service, and the enthusiastic response of our members will insure its success.

LUCIA K. EMLAW
(Mrs. Maynard R. Emlaw) *President*

STATE HEALTH WEEK

The Commonwealth of Virginia for many years has benefited from the earnest endeavors of those of its citizens who are engaged in the promotion of good health for all.

These citizens have labored long and faithfully in healing the sick, in defining the sources of disease, in research for the development of new healing aids, and in informing the general public of the value and means of obtaining better health through happier lives.

It is desirable that the general public become better acquainted with the various community health services existing and proposed.

I take pleasure, therefore, in designating the period March twenty-first through March twenty-seventh, 1955, as STATE HEALTH WEEK in recognition of the valuable service rendered by those engaged in promoting the health of our citizens, and invite the people of Virginia to take this occasion to inform themselves on the great variety of health activities that are being conducted in their behalf.

THOS. B. STANLEY
Governor of Virginia

Old Belt Auxiliary.

We welcome into the Auxiliary family, the Woman's Auxiliary to the Old Belt Medical Society which was organized on January 18, 1955, in South Hill, with the assistance of Mrs. William C. Barr, our State Treasurer. The organization meeting, following a delightful dinner meeting of the doctors and their wives, was held in the dining room of the new Community Hospital.

The new officers elected and installed are: President, Mrs. Robert D. Keeling, South Hill; Vice-President, Mrs. Earl M. Bane, Lawrenceville; Recording Secretary, Mrs. Edward J. Kiember, Alberta; Corresponding Secretary-Treasurer, Mrs. James Northington, South Hill.

Doctor Wilkins A. Ozlin, of South Hill, is Advisor from the Medical Society. The following were appointed to a committee to draw up bylaws for the Auxiliary: Mrs. Wilkins A. Ozlin, chairman; Mrs. Lucius Bracey and Mrs. Thomas A. Saunders, all of South Hill.

The counties covered by this Auxiliary are Lunenburg, Mecklenburg, and Brunswick. We anticipate with pleasure the opportunity of becoming better acquainted with the doctor's wives in this area and pledge to them the willing assistance of all of our officers and chairmen at any time.

L.K.E.

Petersburg.

The Petersburg Medical Auxiliary held their regular monthly meeting on January 31st at the Petersburg General Hospital.

Mrs. Herman Farber, Ways and Means Chairman, announced that the auxiliary will hold a dinner dance at the Country Club on February 26th. Members of her committee are Mrs. William Grossman, Mrs. Julius Hopkins, Mrs. Kirby Hart, and Mrs. William Grizzard. The money raised will be given to the Nursing Scholarship Fund which was established this year.

Mrs. Norman F. Wyatt, chairman of the Nurses' Education Committee, announced that she had completed plans for panel discussions in the junior and senior high schools. Interested students will learn about student nurse life, advantages of the profession, etc., and will also learn how to apply for the nursing scholarship.

Mrs. Joseph McCormick, President, announced that she had endorsed a five hundred dollar government bond over to the hospital as a gift from the auxiliary.

Dr. and Mrs. Milton Ende have a second son, Mark, born in January.

Mrs. John Uzmann
Publication Chairman

Richmond.

The Richmond Auxiliary held their regular meeting on January 21st. Mrs. Maynard Emlaw, State President, and Mrs. M. W. Glover, President-Elect, were honored guests. Mrs. William H. Cox was chairman of the day and Mrs. R. C. Siersema was luncheon chairman.

Mrs. Emlaw spoke about the trip she and Dr. Emlaw took last summer and of their visit with a Belgian doctor. It was most informative and interesting.

Mrs. George H. Snead
Publicity Chairman

Arlington.

The Arlington Auxiliary is very busy with plans for their luncheon fashion show to be held on March 8th. The show is to raise money to complete payment for the call-board the auxiliary gave the hospital last year. Mrs. Albert J. Orlosky is general chairman and Mrs. H. L. Bastien, Mrs. L. G. Gant and Mrs. R. V. Mitchell are the other members of the committee.

Mrs. J. R. McGriff, Today's Health Chairman, has been invited to speak at the Arlington County Medical Society meeting in February. She hopes to encourage more subscriptions to this excellent magazine.

Mrs. John Waters
Publication Chairman

Mrs. Seward.

It is with sorrow that we announce the passing of one of our esteemed members-at-large, Mrs. Blanton P. Seward, Roanoke, who died on December 17th, after an illness of twelve months, the last eight of which were in the hospital. We extend to Dr. Seward the very sincere sympathy of us all.

President's Message . . . .

Public Relations

I RECENTLY had the pleasure and privilege of reading the book of minutes of the ladies organization which established the King's Daughter's Hospital in Staunton about sixty years ago. The struggle these gallant women had to raise a few thousand dollars to buy and open that hospital is in marked contrast to the large sums recently obtained to build and open the present wonderful building. The patient cost at first was about two dollars a day, and the ladies were able to contribute one dollar a day for charity patients. The chief (and probably the only) nurse was paid twenty-five dollars a month, but her salary soon was raised to thirty-five dollars to meet competition for her services.

The gradual growth and expansion of that hospital to its present state is typical of the development of medical facilities made necessary by the rapid accumulation of medical knowledge. Medicine in those early days of the hospital was a very inexact science. It is still so classified but the development of diagnostic aids and specific drugs has made it much more exact.

All business and manufacturing concerns have similarly developed, and as they expanded, the need for maintaining good relations with the public became evident so that now large sums of money are spent by high salaried executives to keep these relations good.

In the old days the doctor had to know his patient well, it was necessary for him to observe everything about the patient because he had little or no laboratory aid. The same doctor delivered the babies, prescribed for the family, occasionally removed some offending organ, and was in general the advisor in adversity. When he rendered a small bill annually for a multitude of services the family was grateful and "public relations" was no problem.

Today when a patient with a complicated illness is sent from one specialist to another after having numerous laboratory procedures, x-ray examinations, et cetera, it is natural that he becomes bewildered and his pocketbook depleted especially if he has to lose some organ to the surgeon in a hospital magnificently equipped but very expensive. The increasing need for explanation to the public is well illustrated by the increase of the budget for the Public Relations Department of the A. M. A. from $102,116 in 1950 to $325,045 in 1955. We should review this progress of misunderstanding and mounting cost in the light of the old-time doctor and remember that the field of the best propaganda of public relations is in every contact between patient and physician. We should not pass them on like an automobile on the assembly line, but each and everyone involved in the complicated care of a sick person should make that patient know that he is interested in him and not only in his heart lesion or his gall stones. That relationship properly handled offers the best opportunity for good public relationship and it costs no more now than it did sixty years ago.



President

Editorial . . . .

Current Medical Legislation

AT THE beginning of last year, when President Eisenhower sent his opening message to the 83rd Congress he said: "The State of the Union is good." Then the President proceeded to tell Congress of all the changes he wanted, to make it better. I think we might start our discussion on a similarly optimistic basis. Fundamentally, the relationship between the Federal government and the medical profession is good—but it is good in a qualified sense.

I will not labor the point known to you all, that the profession has been criticized in Washington. I will not burden you with details of the innumerable Federal laws and regulations past or pending which reflect the critical attitude.

The first basic observation I would like to make is that the problems facing the physicians today are to some extent of their own making. First, because American physicians have done too good a job of selling their services and a very poor job of selling themselves. Second, because they did not anticipate in a positive sort of way the need for doing some of the things which government insists on doing for the masses today.

Let us take up that first point. Like a tired, bashful, forgotten cook peeking out of the hot kitchen of Medical Science, the physician sees his services enjoyed and raved about the world over as the prime reason for America's superlatively high standard of living and health. But he rarely hears a spontaneous word of praise. That is all taken for granted. We have educated the American public to the view that they deserve nothing but the best. As a result, medical science and professional integrity are best remembered when the service happens to fall a little short of the best. Then come the brickbats. During the last 50 years, American medicine has transformed a shortlived, fearful population, living in relatively insanitary conditions, into a nation of good-natured, incurable optimists, and healthy families and individuals who take miracles as a matter of course. They become suspicious and critical only when somebody says that they cannot have everything they want. Too often they are told they should have all the medical care in the world at no cost to themselves.

Naturally this mass psychology of expecting miracles as a matter of course is made to order for the politician whose stock in trade is glib promises. In the campaign oratory, we have heard many speeches promising this and that for the voters, and the welfare state certainly got a shot in the arm. The voters themselves need a little intellectual resistance to these campaign promises. Although government by its very nature can neither produce wealth nor operate our professions effectively, it has seized the spotlight and the public eye as the dispenser of all social blessings. It taxes individuals and businesses to expend public funds, and government spends public funds to extend its control over business and individuals. One might paraphrase the Gospel without irreverance by saying: "The government giveth and the government taketh away. Blessed be the name of the government." Or, "the state is my shepherd, I shall not want."

Obviously, I cannot go into detail and give you even a summary of all of the activities in the field of medical legislation during the 83rd Congress which adjourned in August, but I do want to highlight what I feel are the more important bills and tell you what happened to them. In all, this Congress had before it 16,470 bills and resolutions. Of this number, there were 407 with enough medical implications for the AMA Washington Office to report in its publications. The AMA Committee on

Legislation took action on 197 of these bills, and the Board of Trustees went along generally with the Committee and placed the Association on record one way or the other.

I think it can be safely said that with the adjournment of this Congress, the medical profession no longer found itself ranked as an amateur in legislative matters. The American Medical Association has come a long way I think in improving its relationships with the Congress and federal agencies. It seems that finally we are being called upon by some of the federal agencies to supply our viewpoints on certain aspects of medical practice. Chairman Wolverton of the House Interstate and Foreign Commerce Committee has asked us if we would sit down with members of his staff during the Fall to try to come up with a new version of the reinsurance bill for the next Congress. However, he has not yet called on us. The U. S. State Department has asked for advice and assistance in helping plan amendments to existing regulations which would provide medical and hospital care for the dependents of foreign service personnel. One counsel has been asked also in drawing up regulations concerning the federal civilian employee, voluntary health insurance program that will be presented to the next Congress. And Dr. Frank Berry, the Assistant Secretary of Defense for health and medical matters, has called us in to help in some phases of the intern residency problem.

The American Medical Association two years ago pledged cooperation to all federal agencies and a closer and more friendly relationship has been established.

The most controversial and most widely publicized health legislation before the Congress was the reinsurance bill. The American Medical Association after many conferences and specially called meetings of the Board, and after getting the reactions of many industry and life insurance company representatives, went on record as favoring the major objectives stated in the bill. But the AMA determined that the bill as written would not reach these objectives. As a matter of fact, the measure would in all probability interfere with the normal growth of the very groups the bill seeks to encourage—voluntary prepayment health insurance plans. The House Interstate and Foreign Commerce Committee held extensive hearings on this bill and reported it favorably to the floor. The reaction on the part of individual physicians and state medical societies and other groups against its passage was so great the House recommitted the bill to the Committee. The Senate also held rather extensive hearings, but following the House action, President Eisenhower, frankly concerned over the bill's fate, introduced Mrs. Hobby before a nationwide TV hookup for the purpose of selling reinsurance. I think that perhaps the President is not aware that the Department of Health, Education, and Welfare has not cooperated with the American Medical Association. I am hopeful at this time that this Department will begin to consider the views of the physicians of this country a little bit more seriously.

Last year, the doctor draft law was extended for two years, to expire June 30th of next year. This doctor draft act was also amended this year to make it possible for the armed services to utilize the services of a physician or dentist as a private without having to commission him. Incidentally, this legislation came about as a result of the Major Peress case and was the trigger mechanism for the Army-McCarthy hearings.

A bill was passed prohibiting the interstate shipment of fireworks into a state prohibiting their sale. The Hill-Burton Hospital Construction Act was expanded and extended during this Congress and now has an appropriation for $21 million plus $75 million for the regular program. The law was amended to include chronic disease hospitals, diagnostic and treatment centers, nursing homes and rehabilitation centers.

In my opinion, this extension of the Hill-Burton law is easily the most important piece of medical legislation enacted since Congress passed the original Hill-Burton law about eight years ago. That law, as you know, provides for federal grants to local communities to help in constructing hospitals. The federal government has nothing

to do with administering the hospital once it is built. But that was—and is—for complete hospitals, or general hospitals. For example, grants could not be made to clinics and health centers, or to nursing homes, unless they were a part of a hospital that could itself qualify for a grant. Thus, in the view of the hospital people, the country was getting a lot of hospitals where care is expensive, but not enough clinics, health centers, and nursing homes. Also, although they were eligible for grants, not many chronic disease hospitals were being built. As you know, it is possible to give many types of chronic cases all the care they need in a chronic disease hospital, and at less cost.

If the states and local communities really go to work and plan and dig up their share of the costs, this new Hill-Burton act should result in the next three years in the construction of perhaps a quarter of a billion dollars worth of new facilities. Meanwhile, the regular Hill-Burton program is moving right ahead; the $75 million voted for this year is about what it has been receiving in the past.

I want to mention that the AMA supported this expansion bill, as it supported the original Hill-Burton act eight years ago.

The Hoover Commission, which is studying the Executive Branch with a view of bringing about more efficiency, was authorized and is now at work with a good Medical Task Force. The Indian Hospitals, which for many years have been in the Department of the Interior, were transferred to the Department of Health, Education, and Welfare with the U. S. Public Health Service responsible for administration. The Commission on Intergovernmental Relations, formerly known as the Manion Commission, is now in the process of studying fiscal relationships between various levels of government. The new tax revision law has some features of interest to physicians, primarily the one liberalizing tax deductions of medical expense.

The National Fund for Medical Education has been in existence for some time and has felt the need for a federal charter. This Congress, with the help of the American Medical Association, was able to get this bill through and it has now been signed into law. So the national fund with which the American Medical Education Foundation cooperates is now operating under a federal or Congressional charter.

A new bill allowing physicians to leave instructions with the pharmacist over the telephone for the dispensing of certain narcotic drugs, particularly codeine, has been signed by the President. The change has the support of the pharmaceutical industry and the AMA.

The Jenkins-Keogh bill for private pension plans for the self-employed unfortunately got nowhere in this Congress. A bill providing public health service grants-in-aid to the states for expanding, extending, and improving public health services on local, regional and state levels passed the House and hearings were held by the Senate Labor Committee, but this bill, too, failed to become law. The AMA testified on the measure and suggested certain perfecting amendments.

During the 83rd Congress, there was a flood of bills extending presumption of service connection for many diseases. If the trend of this type of legislation continues, all diseases will be service-connected and the Veterans Administration will be operating a multi-billion dollar medical program. One bill extending the presumption of service connection for tuberculosis to 3 years passed the first session of this Congress and was signed. Two other service presumption bills were reported favorably by the House Veterans Affairs Committee, but were stopped in the House Rules Committee.

Extension of the Social Security Act to more people and an increase in benefits have been major planks in the platforms of both political parties for some years. The American Medical Association has not taken a position on the philosophy of Social Security. However, there have been two provisions of the Act to which the AMA has

paid a lot of attention. One of these is the compulsory coverage of physicians. We opposed this, believing instead that physicians should be granted the privilege of providing for their own retirement incomes through the Jenkins-Keogh Bill. The Social Security Act as signed into Public Law does not include physicians or dentists in its coverage.

Another provision of the social security law which attracted widespread attention was the so-called "waiver of premium" section for permanent and total disability. It is true that this section has been amended and made somewhat more palatable than a similar provision in H. R. 7800 in the 82nd Congress. However, it still is a section which should not have been passed. One bad feature is that it could require a more or less mandatory rehabilitation at the state level before a disabled worker could qualify for "freeze" benefits. We have proposed instead that an employee's best five or ten years be used to arrive at approximately the same benefit; this would not involve the medical profession in physical examinations at the direction of the federal government.

The 83rd Congress also voted extension and improvement of the vocational rehabilitation laws. The AMA took no position on this bill but offered no opposition to it. This new program—again if the states are willing to step up their activity—should result in more than tripling the number of persons rehabilitated annually.

The legislative picture would not be complete without mention of several pieces of legislation the Administration introduced last session, but made no effort to push toward enactment.

Probably most significant is the plan to improve and make more uniform the system of giving medical care to civilian dependents of military personnel. As you know, if you've had any experience with the military, there is no overall system for providing medical care for the wives, the children and the other dependents of the men in uniform.

That isn't the only confusing part. The cost of caring for dependents has never been entered in the budgets of the armed forces as one item. Indeed, budget bureau officials complain that it is completely impossible to trace down these costs.

There is no argument about one thing: the present system should be changed. What care is given should be uniform, both among the three services and geographically. After many conferences with people from the AMA and from other organizations, the Defense Department late in the session introduced what is known as the administration's plan for straightening out the dependent medical care problem. It provides that the services would care for all the dependents they could. Dependents would go to civilian physicians and to civilian hospitals only when there were no military beds or uniformed physicians to care for them.

In this dependency care problem, we disagree with the administration on one major point. The Department and the military services, as I said, want the uniformed physicians and the service hospitals to take care of all the dependents they can accommodate. We think that's wrong. We think the dependents should get their medical care the same place other civilians get theirs—that is, at private hospitals and from private physicians. I don't know whether the Department eventually will see it our way. If it does not, we are likely to collide head-on with the services on this one. It is a fundamental issue.

This bill was not pressed last session, but there is no question about what will happen next year. The Defense Department will attempt to have the bill enacted.

It thus may be seen that the American Medical Association was definitely in favor of the objectives of the President's health program and that it supported and gave technical assistance to the huge majority of it. There were more health measures enacted into law at this Congress than in any Congress in history, to our knowledge.

Mr. Eisenhower, meanwhile, has informed the people that he will push in the next Congress those parts of his program which he did not get in the last Congress. Accordingly, we can all look forward to a revival of, *one,* the administration's reinsurance proposal, *two,* dependent medical care for military personnel, and *three,* health insurance for all civilian federal employees at home and abroad.

I think I would be giving you a false sense of tranquility if I did not mention one other field that generally is not considered legislative, but that nevertheless is an important congressional activity.

I refer to the total share of the federal budget spent on health and medical programs --the total, and all the small bits and pieces that make up the total. The total grows from year to year, and it doesn't seem to make much difference which party is in control. Now I am not saying that is wrong—I am merely saying that it is something the physicians of the country—and particularly of this section—should observe carefully.

During this fiscal year the federal government expects to spend a little more than two billion, one hundred million dollars on all national health programs, ranging from huge, costly hospitals to plant clinics run by one nurse. We are calloused to billions of dollars, so I'll put it this way:

The total is eight per cent more than was spent for the same purpose last year.

If you drop out national security costs, the total represents 10 per cent of the entire federal budget.

The two-billion dollars being spent by the federal government this fiscal year on health and medical programs is almost four times the total budget for the Department of the Interior; it is more than six times the total budget for the Department of Labor; it is eight times the budget of the Department of State.

I will give you one other comparison. The Department of Commerce estimates that this year the American public will spend a total of 12 billion dollars for all health costs, from research to toothpaste. And the federal government will pay out one sixth of this total.

In closing, I want to leave with you the thought that the American Medical Association is not mad at anyone in Washington. We think that in general the objectives of the present administration are worthy objectives. And we know that what goes on in Washington—in the agencies as well as in Congress—deserves a lot of watching. That is what we in the Washington Office of the AMA are attempting to do for you.

Frank E. Wilson, M.D.

Editor's Note—Dr. Wilson is Director of the Washington Office of the American Medical Association. This article was presented at the 1st Interstate Scientific Assembly, Washington, D. C., October 31-November 3, 1954.

Society Proceedings . . . .

Halifax County Medical Society.

Officers for this Society for 1955 are: President, Dr. W. J. Hagood, Clover; vice-president, Dr. W. D. R. Driscoll, South Boston; and secretary-treasurer, Dr. George E. Chappell, Halifax.

Bedford County Medical Society.

At the last meeting of 1954 held at the new Bedford County Memorial Hospital, Dr. W. G. Hardy was elected president, to succeed Dr. J. G. Jantz. Other officers are: Dr. W. V. Rucker, vice president; and Dr. Dennis Robinson, secretary-treasurer.

The Tazewell County Medical Society

Met on December 15th at The River Jack Restaurant, North Tazewell. Dr. W. A. Laqueur, pathologist at St. Luke's Hospital, Bluefield, W. Va., spoke on Liver Diseases and Methods of Diagnosis.

The following officers were elected to assume office January 1955: President, Dr. W. T. Henderson, Richlands; vice-president, Dr. C. H. Goodykoontz, Bishop; secretary-treasurer, Dr. Mary Elizabeth Johnston, Tazewell (re-elected).

Accomac County Medical Society.

Officers for this Society for 1955 are Dr. William C. Fritz, Onancock, president; Dr. Walter A. Eskridge, Parksley, vice-president; and Dr. James C. Doughty, Onancock, re-elected secretary-treasurer for the sixteenth consecutive year.

Richmond Academy of Medicine.

The Section on the History of Medicine of the Academy held its annual meeting on February 8th. Dr. Owsei Temkin, Association Professor of the History of Medicine, Institute of the History of Medicine, Johns Hopkins University, spoke on "Art, Anatomy and Learning in the Renaissance".

A Virginia Military Institute diploma, signed by General Stonewall Jackson when he was professor of natural history there, was presented to the Academy of Medicine. The diploma was issued in 1857 to the late Dr. John H. Cameron of Bath and Rockbridge Counties. Other diplomas of Dr. Cameron's, which were presented at the same time, included one from the Societe de Cadets at VMI and one from the Medical College of Virginia.

Officers of the Section, elected at this meeting, are Chairman, Dr. Edward Holmes; vice-chairman, Dr. Hunter H. McGuire; and secretary, Dr. William Johns.

News . . . .

Calendar of Coming Events

AERO MEDICAL ASSOCIATION—Hotel Statler, Washington, D. C., March 20-23

INTERNATIONAL ACADEMY OF PROCTOLOGY—The Plaza Hotel, New York City, March 23-26

SOUTHEASTERN ALLERGY ASSOCIATION—Orange Court Hotel, Orlando, Florida, March 25-26

EASTERN STATES EDUCATION CONFERENCES—New York Academy of Medicine, New York City, April 21-22

INDUSTRIAL HEALTH CONFERENCE—Memorial Auditorium, Buffalo, New York, April 23-29

VIRGINIA SOCIETY OF OPHTHALMOLOGY & OTOLARYNGOLOGY—Natural Bridge, Va., May 6-7

VIRGINIA ACADEMY OF GENERAL PRACTICE—Hotel Chamberlin, Old Point, Va., May 13-15

Dr. Herbert C. Jones

Has been named president of the 1955 Petersburg Community Chest. He has been a leader in its activities for a number of years and is beginning his third term on the board of directors.

Dr. L. Benjamin Sheppard

Has been named president of the Richmond Rotary Club.

Attention Physician Pilots.

Some time ago several physicians simultaneously conceived the idea of forming a national society of flying physicians. Initial action was started by Mr. Mark E. DeGroff of Tulsa, Oklahoma, medical equipment manufacturer, who offered to act as a central office until preliminary arrangements could be made. A notice in the A.O.P.A. Newsletter brought forth over one hundred interested inquiries. About twenty eight physician pilots attended the American College of Surgeons Meeting in Atlantic City and twenty four attended the AMA session in Miami. It was felt that enough interest was shown to warrant an attempt to organize.

It was decided that the purposes of this society should be scientific, educational, and social. Physicians have a considerable influence which should be passed on to everyone to promote greater aviation safety. Further, physicians who have this interest

could learn much about the technical aspects of flying from association with each other.

The immediate objectives are: compilation of a complete list of physician pilots; appointment of temporary local area chairmen; the collection of ideas and suggestions; and encourage physicians to fly in to the AMA Meeting at Atlantic City, June 6-10, 1955.

A scientific and social program can be arranged at Atlantic City if enough interest is shown.

Will physician pilots who are interested please send their names, plane flown and landing field to the local chairman of their area, or, if not known, to H. D. Vickers, M. D., 25 Jackson Street, Little Falls, New York, temporary chairman.

Richmond EENT Society.

Officers of this Society are Dr. Julius C. Hulcher, president, and Dr. Charles N. Romaine, secretary. They meet the first Tuesday of January, March, May and October at the Commonwealth Club.

Dr. C. C. Hatfield

Was recently installed as one of the directors of the Saltville Kiwanis Club.

Dr. Howard Masters,

Richmond, was one of two Virginia men recently named to the college of electors of the Hall of Fame for Great Americans.

State Board of Medical Examiners.

Dr. K. D. Graves, Secretary-Treasurer of the Virginia Board of Medical Examiners, reports that the following were licensed by the Board at its meeting and the examinations December 9th to 11th, inclusive, 1954:

By Examination:

Dr. Paul Henry Boyer, New York, N. Y.
Dr. George John Chohany, Williamsburg
Dr. Nourollah Norman Cohen, St. Albans, N. Y.
Dr. Vernon Bert Dettor, Stone Harbor, N. Y.
Dr. Joao Gustavo dos Santos, Richmond
Dr. Eva V. S. Ebin, New York, N. Y.
Dr. Dirk Enthoven, Richmond
Dr. Sixto Fernando Guiang, Jr., Pittsburg, Pa.
Dr. Helen Margaret Hackman, Stockton, Calif.
Dr. Zoltan Halmai, Raleigh, N. C.
Dr. James Stanley Hens, Washington, D. C.
Dr. Cornelia Hoch-Liget, Charlottesville
Dr. Harold W. Kimmerling, Richmond
Dr. Pierre Aymar Lechaux, Washington, D. C.
Dr. Richard Lehmann, Richlands
Dr. Houshang Moghtader, Rego Park, N. Y.
Dr. Hernando Munoz, Norfolk
Dr. Simon Paluch, Alexandria
Dr. Carl Sheldrick Plumb, Roanoke
Dr. Samuel B. Rentsch, Jr., Richmond
Dr. Irene Elizabeth Roeckel, Washington, D. C.
Dr. Henry Wade Stinson, Silver Spring, Md.
Dr. George John Varecska, Norfolk
Dr. Gerald Theodore Zwiren, Norfolk

By Endorsement:

Dr. John Powell Anderson, Waynesboro
Dr. James Claire Andrews, Charlottesville
Dr. Joseph L. Atchison, Springfield
Dr. Marie Frances Ayres, Falls Church
Dr. Bruce Lawrence Baer, Chapel Hill, N. C.
Dr. Harold L. Beddoe, Richmond
Dr. Kenneth Hubert Bailey, Radford
Dr. Lee Arndell Barnes, Franklin
Dr. Ardwin H. Barsanti, Falls Church
Dr. James S. Berger, Norfolk
Dr. Max E. Bertholf, Roanoke
Dr. John Bernard Birch, Abingdon
Dr. Robert Guy Blackwelder, Marion
Dr. Lemuel Bowden, New York, N. Y.
Dr. George C. Branche, Jr., Richmond
Dr. James Crawford Bruce, Alexandria
Dr. John Daniel Bunce, Arlington
Dr. William Wilson S. Butler, III, Roanoke
Dr. Robert E. Byrne, Arlington
Dr. James Richard Chambers, Alexandria
Dr. Jonathan Otis Cole, Washington, D. C.
Dr. Charles David Cooper, Alexandria
Dr. George A. Courie, Washington, D. C.
Dr. Joseph Wentworth Coxe, III, Richmond
Dr. John Angelo Dattoli, Arlington
Dr. LeEarle B. Drake, Warrenton
Dr. Byron Thomas Eberly, Norfolk
Dr. Merle Weaver Eshelman, Harrisonburg
Dr. Robert J. Faulconer, Norfolk
Dr. Robert Joel Fink, Chevy Chase, Md.
Dr. John Orland Ford, Wytheville
Dr. Israel Frieman, Richmond
Dr. Robert Conrad Fraasa, Buena Vista
Dr. Aaron Harry Gerber, Washington, D. C.
Dr. Everett J. Gordon, Washington, D. C.
Dr. Samuel H. Gould, Hopewell
Dr. Leonard Harris, Newark, N. J.
Dr. Martin A. Hoffman, Richmond
Dr. Francis Gregg Horne, Hampton
Dr. Benjamin F. Huntley, III,, Durham, N. C.
Dr. Leo Ernest Johns, Jr., Norfolk
Dr. John Franklin Jonas, Clifton Forge
Dr. Joseph Foster Kell, Jr., Richmond
Dr. Elizabeth A. Koppel, Washington, D. C.
Dr. James Harold Lee, Jr., Wilmington, Del.
Dr. David Levine, Millenbeck
Dr. Bernard G. Levy, Springfield
Dr. Jean Douglas Lockhart, Alexandria
Dr. Joseph C. MacPhail, Portsmouth
Dr. Harry S. McGaughey, Jr., Charlottesville
Dr. John Robert McGreevy, Arlington
Dr. Howard Otis Mott, Arlington
Dr. William H. Muller, Jr., Charlottesville
Dr. William Robert Parks, Harlan, Ky.
Dr. Philip Young Paterson, Charlottesville
Dr. Joseph Cosgrove Peck, Galax
Dr. Joseph A. Provenzano, Annandale

Dr. Herbert P. Ramsey, Washington, D. C.
Dr. Manley Whitfield Rankin, Jr., Eagle Rock
Dr. Charles Loren Ransom, Danville
Dr. Leonard J. Ravitz, Shaker Heights, Ohio
Dr. Marvin F. Sherill, Portsmouth
Dr. Charles Glenn Smith, Falls Church
Dr. Bertram C. Snyder, Arlington
Dr. Mitchell Alden Spyker, Richmond
Dr. Raymond Stoller, Silver Spring, Md.
Dr. Walter J. Walker, Jr., Dublin
Dr. James Richard Wennemark, Radford
Dr. Louis Howard Williams, Newport News

Homeopathy
Dr. John A. Swartwout, Falls Church

Osteopathy
Dr. Brewster Edgar Topping, Arlington

Dr. Chester D. Bradley,

Newport News, delivered a paper at the International Congress of the History of Medicine in Rome, Italy, in September. His subject was "Docteur Craven et la vie de prison de Jefferson Davis."

Gill Memorial Spring Congress.

The Twenty-Eighth Annual Spring Congress of the Gill Memorial Eye, Ear and Throat Hospital, Roanoke, will be held April 4-9. The program includes topics on ophthalmology, otology, rhinology, laryngoscopy, facio-maxillary surgery, bronchoscopy and esophagoscopy. Guest members of the faculty are Drs. Henry L. Birge, Hartford, Connecticut; Paul Boeder, Southbridge, Massachusetts; William B. Clark, New Orleans; Dan M. Gordon, New York; Anderson C. Hilding, Duluth, Minnesota; Chevalier L. Jackson, Philadelphia; Bertha S. Klein, Chicago; Walter E. Loch, Baltimore; T. G. Martens, Rochester, Minnesota; Daniel S. Miller, Boston; Daniel Ogle, Washington; Thomas Paine, Birmingham, R. Townley Paton, New York; James Purnell, New York; Albert D. Ruedeman, Detroit; Robert E. Ryan, St. Louis; Richard Schneider, Ann Arbor; John Sheldon, Ann Arbor; G. Edward Tremble, Montreal, Canada; and Grant Ward, Baltimore.

Full information may be obtained from the Hospital, Box 1789, Roanoke, Virginia.

Richmond Academy of General Practice.

At the meeting of the Academy on January 18th, Dr. F. Elliott Oglesby was installed as president, succeeding Dr. W. Linwood Ball. Other officers are: president-elect, Dr. Charles G. Young; vice-president, Dr. Richard Crossen; secretary, Dr. Charles L. Williams; and treasurer, Dr. Wayne C. Campbell. Drs. Reuben F. Simms and R. S. Faris are new directors.

Dr. Thomas Nelson Page Johns,

Richmond, was guest speaker at the February 2nd meeting of the Medical-Surgical Staff of the Northampton-Accomac Memorial Hospital, Nassawadox. His subject was "Problems of Chest Surgery" and was part of a program of Continuation Education through the Medical College of Virginia.

Annual Postgraduate Institute.

The Philadelphia County Medical Society will hold its 19th Annual Postgraduate Institute at the Bellevue-Stratford Hotel, March 29-April 1. Among the subjects to be covered are Treatment of Hypertension, Undesirable Side Effects of Certain Drugs; Deformities in Children and Adults; Coronary Artery Disease; Advances in Roentgenological Diagnosis and Treatment; Emotional Implications of Aging; Diseases of the Eye; and Infertility.

For further information contact the Director of the Institute, Dr. Leandro M. Tocantins, 301 S. 21st Street, Philadelphia 3.

Richmond Doctors on Program.

Drs. Guy W. Horsley and Daniel D. Talley, III, were among the speakers at the Southeastern Surgical Congress' silver anniversary assembly in Atlanta, February 21-24. Dr. Horsley spoke on Diagnosis and Management of Peptic Ulcer and Dr. Daniel on Modern X-Ray Aspects of Gastric Ulcer.

Symposium on Tumors.

The first annual symposium on tumors, conducted by the Tumor Clinics of the Jefferson, Lewis-Gale and Memorial and Crippled Children's Hospitals of Roanoke, was held on February 3rd. The meeting was attended by 120 physicians and 15 of the key cancer lay-workers of the area. Dr. Michael B. Shimkin, Chief of Biometry and Epidemiology Branch of the National Cancer Institute, was moderator for the panel discussions which were on the subjects of Malignancies of the Skin, Malignancies of the Uterus, and Malignancies of the Stomach. A color movie, prepared by the American Cancer Society on "Cancer, A Research Story" was shown. Mr. Bernard W. Woodahl, Executive Director, Virginia Division, American Cancer Society, gave a discussion of Tumor Clinics.

Those participating in the symposia were Drs. James C. Gale, William H. Kaufman, William L. Sibley, Charles D. Smith, W. W. S. Butler, III, James B. Hutcheson, A. P. Jones, John A. Martin, Walter S. Johnson, H. Rowland Pearsall, Daniel Leavitt, and James G. Snead.

Tenth District Council.

On January 27th, the Tenth District Council met at the residence of Dr. H. C. Bates, Jr., Councilor. Representatives present included Drs. Charles Amole and Milton Stein from Alexandria, Drs. Robert Hunt and Robert Rounds from Fairfax County, and Drs. J. R. B. Hutchinson and Henry Bastien from Arlington County. A general discussion was held on ways and means of increasing cooperation and effectiveness of the three component societies. Plans were formulated to hold a joint meeting in the near future. This is hoped that this meeting can be partly social, to promote friendliness among the local physicians, and partly instructive, to bring out some important medical problems faced by the entire district.

Virginia Urological Society.

Officers elected at the annual meeting of this Society, held during the First Interstate Scientific Assembly in Washington, are: President, Dr. C. J. Devine, Norfolk; vice-president, Dr. Hugh Warren, Charlottesville; and secretary-treasurer, Dr. William Russell Jones, Richmond.

Post-Graduate Day Program in Roanoke.

The Staff of the Memorial and Crippled Children's Hospital, Roanoke, Virginia, will hold its Sixth Annual Post-Graduate Day Program Wednesday, March 23, 1955 at the Hotel Roanoke. Registration begins at 1:00 P.M. and the afternoon program is as follows:

Surgery of Mitral Valvular Disease—Dr. Lewis H. Bosher, Jr., Medical College of Virginia.

Surgical Timing and Prognosis of Congenital Heart Disease—Dr. J. Francis Dammann, Jr., University of Virginia.

Clinical-Pathological Conference—Clinician: Dr. Proctor Harvey. Georgetown University; Pathologist: Dr. James C. Gale, Memorial and Crippled Children's Hospital.

Panel Discussion: Problems in Pre- and Post-Operative Care—Dr. Proctor Harvey, Georgetown University, Moderator; Dr. Lewis H. Bosher, Jr., Medical College of Virginia; Dr. J. Francis Dammann, Jr., University of Virginia; Dr. Elliot V. Newman, Vanderbilt University.

Following the afternoon session, there will be a social hour and banquet and an after-dinner lecture as follows:

The Basic Mechanism and Clinical Classification of Heart Failure—Dr. Elliot V. Newman, Vanderbilt University.

Duke Hospital Poison Control Center.

Duke Hospital has established a Poison Control Center to serve as an information bureau and to offer treatment to victims of poisoning. By calling the Hospital at Durham, North Carolina (phone 9011) and asking for the Center, physicians can readily and at all hours obtain information concerning the toxic ingredients in various mixtures as well as the latest forms of therapy. In addition, the Center will receive patients for emergency treatment at any time.

American Congress of Physical Medicine and Rehabilitation.

The 33rd annual scientific and clinical session of the American Congress of Physical Medicine and Rehabilitation will be held August 28th through September 2nd at the Hotel Statler, Detroit. All sessions will be open to members of the medical profession in good standing in the American Medical Association.

Full information may be obtained by writing to the executive secretary, Dorothea C. Augustin, 30 North Michigan Avenue, Chicago 2, Illinois.

Wanted.

A Physician for contract practice in coal camp. Write #30, care Virginia Medical Monthly, Box 5085, Richmond 20, Va. (*Adv.*)

Obituaries . . . .

Dr. Isaac Alexander Bigger, Jr.,

Chief of Surgery at the Medical College of Virginia for the past twenty-five years, died January 27th, after an illness of about a year. He was a native of South Carolina and sixty-one years of age. Dr. Bigger received his medical degree from the University of Virginia in 1919, following which he was an instructor and assistant professor of surgery there until 1927. He was associate professor of surgery at Vanderbilt University from 1927 to 1930, when he became full professor of surgery and surgeon-in-chief at the Medical College of Virginia. In this capacity, Dr. Bigger also served as chairman of the department of general surgery at the College and as Surgeon to the Crippled Childrens' Hospital.

Dr. Bigger served as president of the Richmond

Academy of Medicine in 1946 and was president of the Virginia Division of the American Cancer Society in 1947. He took an active part in the affairs of the American Association for Thoracic Surgery, serving as its treasurer, vice-president and president. He was a founding member of the American Board of Surgery. Dr. Bigger was a member of many other national, state and local medical organizations, having been a member of The Medical Society of Virginia for thirty-two years.

Dr. Bigger was a member of the editorial committee for the Thoracic Surgery Manual, associate editor of the American Practitioner, and a co-author with the late Dr. J. Shelton Horsley of a two-volume work "Operative Surgery".

An editorial in the Richmond paper stated "Dr. Isaac Alexander Bigger was that rarity among men, a man who is genuinely great, and genuinely good. . . . There was an intern who commented that 'a patient was never a "case" to Dr. Bigger—a patient was a human being whom he wanted to help get well.' . . . At the Medical College of Virginia Hospital, he counted for much more than 'chief of surgical services.' He was the hub around which the hospital revolved, yet he never sought glory or pulled rank."

Dr. Bigger is survived by his wife and three daughters.

Dr. Henry Page Mauck,

Prominent orthopedic surgeon of Richmond, died January 22nd at the home of a friend where he was having dinner. He was sixty-three years of age and a graduate of the Medical College of Virginia in 1913. After service during World War I, Dr. Mauck began the practice of orthopedics in Richmond. He was a member of the board of directors of Johnston-Willis Hospital, treasurer of the American Orthopedic Association, and a member of the Robert Jones Society of Orthopedic Surgeons. He was chief of the Department of Orthopedics at Johnston-Willis and Crippled Childrens' Hospital and was chairman of the Department of Orthopedic Surgery at the Medical College of Virginia. Dr. Mauck was also a member of the State Board of Health, having been appointed by Governor Battle in 1954.

Dr. Mauck was a member of many other national, state and local medical organizations. He had been a member of The Medical Society of Virginia for thirty-six years.

His wife and three sons survive him.

Dr. Percy Harris,

Former Mayor of Scottsville and well-known physician, died February 4th following a heart attack. He was seventy-three years of age and a graduate of the Medical College of Virginia in 1905. Dr. Harris was prominent in civic affairs of his community, having served as Mayor for twenty years, resigning this position about four years ago. He was a Mason and a member of the Lions Club. Dr. Harris had been an active member of The Medical Society of Virginia for fifty years. He had served on committees and had been a member of the Council for several terms.

His wife and four children survive him.

Dr. Rooker John White,

Prominent physician of Keller, died January 5th after a short illness following coronary thrombosis. He was seventy-five years of age and a graduate of the Medical College of Virginia in 1901. Dr. White opened his office at Keller in 1903. In spite of a large practice. he found time for many civic and business activities, having served on the Accomack County Board of Health, a member and chairman of the Accomack School Board. He was director of a bank and president of a fire insurance company. Dr. White had been a member of The Medical Society of Virginia for fifty years and was made a Life Member in 1951.

His wife and two children survive him.

Dr. George August Leonard Kolmer.

This office has just learned of the death of Dr. Kolmer, Salem, which occurred on November 21st. He was seventy-three years of age and had been a member of The Medical Society of Virginia for forty-one years.

The following resolution was adopted by the Roanoke Academy of Medicine.

The Roanoke Academy of Medicine learned with profound regret of the death of our fellow physician and friend, Dr. George Kolmer. The citizens of the Town of Salem, Roanoke County, and the entire community have lost a good friend, and a most able physician.

Dr. Kolmer graduated from Johns Hopkins in 1913 following which he served one year with the Virginia Public Health Service. He established his practice in Salem in 1914, where he had been located and actively practicing since. He served in both World War I and World War II, and held the rank of Lieutenant Colonel. He was a charter member of American Legion Post 19. He was an active member of the College Lutheran Church, trustee of Roanoke College, and vice-president of the Farmer's National Bank.

Dr. Kolmer served for over twenty years as Health Officer of the Town of Salem, and was also Medical Examiner for Roanoke County.

He was married to Miss Emma Cook in 1931, and is survived by her, two sons, George Jr., and J. Wilson, and one daughter, Mary Cook, as well as his brother, Dr. John A. Kolmer of Temple University.

Dr. Kolmer will be sincerely missed by his large host of patients and friends in his community.

Be It Resolved that a copy of this resolution to spread upon the minutes of the Roanoke Academy of Medicine, a copy sent to the Virginia Medical Monthly, and a copy to his family.

Russell B. Smiley, M. D.
Fred S. Cruser, M. D.

Dr. William Richard Morton,

Well know physician of Richmond, died January 30th as a result of injuries suffered in an automobile accident on the 20th. He was a native of Oxford, North Carolina, and fifty-one years of age. He graduated from the Medical College of Virginia in 1926. Dr. Morton had practiced in Richmond since that time and was a member of the medical staff of Grace Hospital. He was active in civic affairs, having served with the Richmond Chamber of Commerce, Richmond Better Business Bureau, and the Barton Heights Citizens Association. Dr. Morton was a former member of the Board of Trustees of the Richmond Academy of Medicine. a past president of the Richmond Academy of General Practice, and had been a member of The Medical Society of Virginia since 1927.

His wife and two children survive him.

Dr. Albert Patton Whited,

One of the oldest practicing physicians in Southwestern Virginia, died January 23rd. He was eighty-two years of age and made his home at Honaker, where he had practiced for the past fifty years. Dr. Whited was a graduate of the Medical College of Virginia in 1903. He had been a member of The Medical Society of Virginia for fifty years and was made a Life Member in 1953.

His wife and several children survive him.

Dr. Bates.

Dr. Robley D. Bates, Sr., departed this life, at his home at Newtown on October 23, 1954, in the 79th year of his age. He was a graduate of the Medical College of Virginia in 1906. He had practiced his profession in the community in which he was born and reared all of his life, beloved and respected by a host of neighbors and friends who attested their love and devotion by their attendance at his funeral at Bowling Green in large numbers.

Dr. Bates was a charter member of the Mid-Tidewater Medical Society, a past president, and always a loyal and active member, and lent to its deliberation his wisdom and good counsels. He served the First District as Councilor of The Medical Society of Virginia, and was President of The Medical Society of Virginia. For many years he was a member of the State Board of Medical Examiners.

Dr. Bates was the personification of the good physician, who kept abreast of advancements, taking the worthwhile and pushing aside the useless, learned in understanding human nature, gentle and kind. He was devoted to medicine and contributed to organized medicine in many ways. To us who knew him he stood four square, a loyal colleague who upheld the honor and dignity of the profession by every action and deed.

Therefore Be It Resolved, that the Mid-Tidewater Medical Society forward to the family of Dr. Bates a copy of this resolution and a copy be entered in the minutes of the Society.

Thomas E. Smith, *President*
Malcolm H. Harris, *Secretary*

Dr. Fay.

Dr. Frederick Oliver Fay of Norfolk was born in Union Springs, Alabama in 1904 and died very suddenly at his home on November 13, 1954.

After completing his studies in the public schools, Dr. Fay was graduated from King's College and four years later received his M.D. degree from the Medical College of Virginia. He spent the years from 1930 to 1934 receiving training in his chosen specialty of Otolaryngology and Ophthalmology. He entered practice in Wilmington, N. C., and after a few years there, he moved to Norfolk in 1940 to continue this specialty.

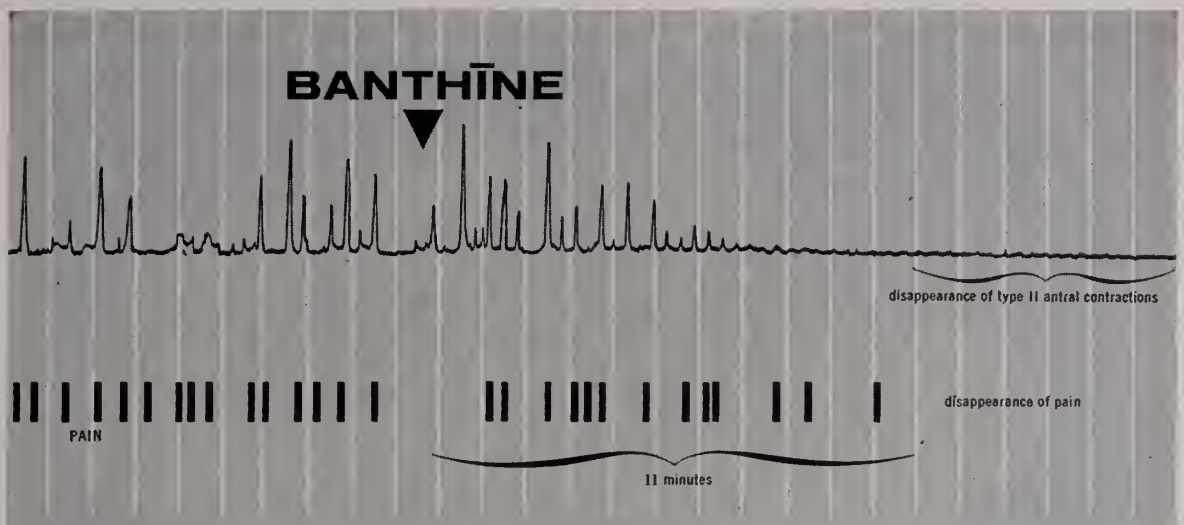
Early in World War II, Dr. Fay joined the Medical Department of the United States Navy as a Lieutenant-Commander, serving at the Norfolk Naval Operating Base and later in San Juan, Puerto Rico; he was separated from active service at the end of the war with the rank of Captain. He remained in the Active Reserves until his death and for four years prior to his death he had been senior Medical Officer of the St. Helena Naval Reserve Training Center.

Since resuming private practice in 1946, Dr. Fay had many demands on his time and energy. In addition to conducting a very active private practice and his duties in the Naval Reserve, Dr. Fay had given generously of his time and ability in the free work of the clinics of two hospitals here and was for eight years Consultant in Ophthalmology to the Norfolk City Venereal Disease Clinic. He was also active in civic and church affairs and belonged to many civic and fraternal organizations; he was an active member of the Knox Presbyterian Church and Men's Bible Class. Although the last years of his life were attended by a serious heart condition, the welfare of his patients was Dr. Fay's first concern. His was a retiring nature and he was a truly sweet and unselfish man. The love his patients felt for him attests to this, full well.

Dr. Fay was held in high esteem by all who knew him. The Norfolk County Medical Society and the community have suffered a great loss in the passing of this fine physician, Christian gentleman, and beloved member. He is survived by two sons, Fred O. Fay, Jr., and James Edward Fay, and one brother and one sister who reside in Alabama.

We ask that our sympathy be extended to the surviving members of his family and that a copy of these resolutions be sent to them, spread on the minutes of this Society, and a copy forwarded to the Virginia Medical Monthly.

A. D. Morgan, M.D.
A. A. Burke, M.D.
W. Wickham Taylor, M.D.



Effect of 100 mg. of Banthine administered orally on antral gastric motility and duodenal ulcer pain.

Hightower, N. C., Jr., and Gambill, E. E.: Gastroenterology 23:244 (Feb.) 1953.

Hypermotility and Hyperacidity

A recent evaluation of anticholinergic therapy in peptic ulcer emphasizes the fact that now the profession has at its disposal agents that are "effective in reducing both secretory and motor activity of the stomach."

The effect on motor activity is generally more pronounced and less variable than on secretion; pain relief is usually prompt; a high degree of effectiveness is noted in ambulatory ulcer patients.

Ruffin, J. M.; Texter, E. C., Jr.; Carter, D. D., and Baylin, G. J.: J.A.M.A. 153:1159 (Nov. 28) 1953.

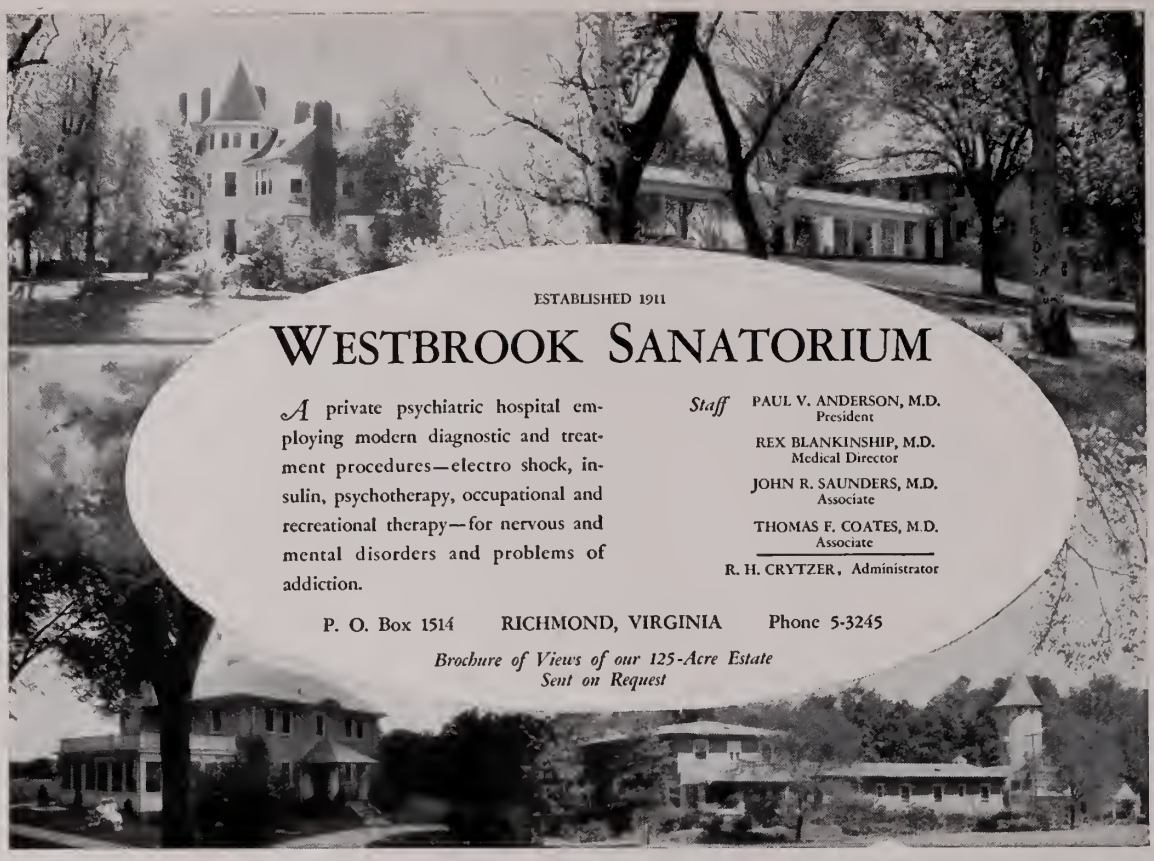
With its proved anticholinergic effectiveness, Banthine has been found extremely useful in the medical management of active peptic ulcer, whether duodenal, gastric or marginal.

The immediate increase in subjective well-being and the simplicity of the Banthine regimen assures patient cooperation. The recommended initial therapeutic dose is 50 or 100 mg. (one or two tablets) every six hours around the clock, with subsequent individual adjustment. The usual measures of diet regulation, rest and relaxation should be followed.

Banthine is effective in other conditions caused by excess parasympathetic stimulation. These include hypertrophic gastritis, acute and chronic pancreatitis, biliary dyskinesia and hyperhidrosis. Banthine is contraindicated in the presence of glaucoma and should be used with caution in the presence of severe cardiac disease or prostatic hypertrophy.

Banthine bromide (brand of methantheline bromide) is supplied in scored tablets of 50 mg. and in ampuls of 50 mg. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

SEARLE



RIVERSIDE CONVALESCENT HOME

Sophia & Fauquier Sts. **Fredericksburg, Virginia**



For convalescent, aged, chronically ill, and retired persons.

Centrally located in Historic Fredericksburg, on the beautiful Rappahannock, in the former Mary Washington Hospital Building. Completely redecorated and refurnished.

Eighty Bed Capacity

Medical Supervision

Inspection Invited

Rates:
$30.00 to $75.00 per week

TUCKER HOSPITAL Inc.

212 West Franklin Street,

Richmond, Virginia

A private hospital accepting for diagnosis and treatment organic neurological conditions, selected psychiatric and alcoholic cases, metabolic disturbances of an endocrine nature, individuals who are having difficulty with their personality adjustments, and children with behavior problems. Patients with general medical disorders admitted for treatment under our staff of visiting physicians.

Under the Professional Charge of

DR. HOWARD R. MASTERS, DR. JAMES ASA SHIELD

AND ASSOCIATES

Saint Albans Sanatorium

RADFORD, VIRGINIA



125-BED PRIVATE PSYCHIATRIC HOSPITAL FOR THE TREATMENT OF NERVOUS AND MENTAL DISORDERS, INCLUDING ALCOHOLISM AND ADDICTION.

STAFF

James P. King, M. D., Director

James K. Morrow, M. D. Thomas E. Painter, M. D. Daniel D. Chiles, M. D.

James L. Chitwood, M. D., Medical Consultant

Affiliated Clinic Offering Psychiatric and Psychological Evaluation and Therapy:

BLUEFIELD MENTAL HEALTH CENTER

1400 Bland Street **Bluefield, W. Va.**

David M. Wayne, M. D., Director

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

Medical College of Virginia

HOSPITAL DIVISION

RICHMOND, VIRGINIA

A health center using the latest methods of diagnosis and treatment of disease.

MEDICAL COLLEGE OF VIRGINIA HOSPITAL
OUT-PATIENT DEPARTMENT
SAINT PHILIP HOSPITAL
DOOLEY HOSPITAL

The patient's welfare is our primary interest.

C. P. CARDWELL, JR., *Director*

Appalachian Hall • Asheville, North Carolina

ESTABLISHED 1916



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, SR., M.D.
Diplomate in Psychiatry
WM. RAY GRIFFIN, JR., M.D.

MARK A. GRIFFIN, SR., M.D.
Diplomate in Psychiatry
MARK A. GRIFFIN, JR., M.D.

For rates and further information write APPALACHIAN HALL, ASHEVILLE, N. C.

A Modern Hospital for the Treatment of Alcoholism Exclusively

- A private hospital offering scientific, institutional, medical, psychological, reflex, reduction and other methods for the rehabilitation of consent patients suffering from alcoholism.

- All equipment modern with facilities to take care of 50 patients both male and female.

- Under the direction of a competent licensed M. D. with five consultant physicians subject to call. Registered Nurses in charge 24 hours daily.



Approved and licensed by the Virginia State Hospital Board. Atop beautiful Mt. Regis, five miles West of Roanoke, on Highway 11, in the quiet serene mountains of Virginia, conducive to rest, comfort and recuperation. Doctors inspection invited. For information phone or write.

WHITE CROSS HOSPITAL

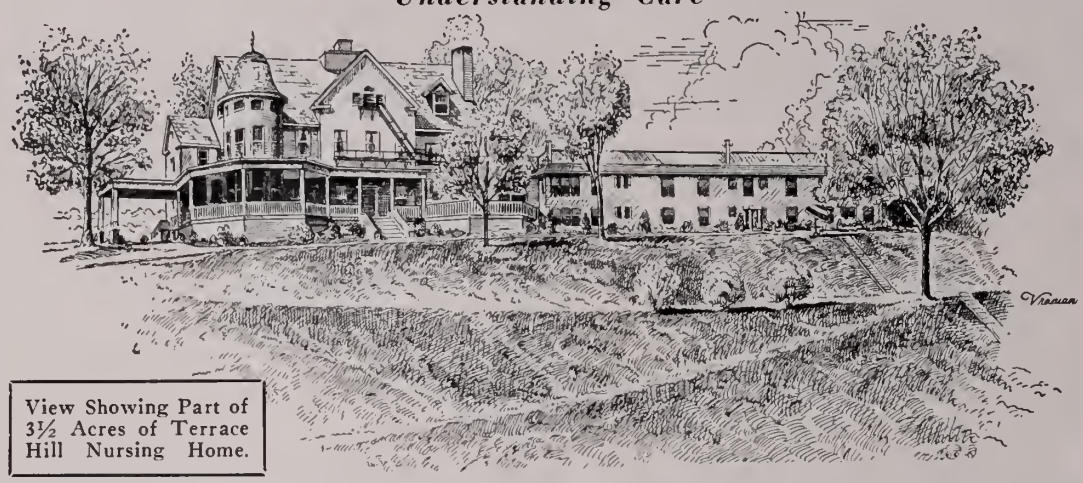
Five Miles West of Roanoke on Route No. 11.
Salem, Virginia — Phone Salem 287

Copyright 1948. H. N. Alford, Atlanta, Ga.

RICHMOND'S FINEST + ONE OF VIRGINIA'S LARGEST

TERRACE HILL NURSING HOME, INC.

"Understanding Care"



View Showing Part of 3½ Acres of Terrace Hill Nursing Home.

TERRACE HILL NURSING HOME is a privately managed nursing home specializing in 24 hour daily nursing care for elderly people, convalescent and chronic cases. Home-like atmosphere. Exclusive park-like grounds. Supervised diets. Nutritious food. Private and semi-private rooms with baths. Accommodations for 45 guests. Under supervision of a resident, registered nurse. Rates from $45.00 to $60.00 per week for room, board and general nursing care. Your inspection invited.

City, State and Nationally Approved and Registered

For Further Information or Reservation write to

DIRECTOR, Terrace Hill Nursing Home • 2112 Monteiro Ave. • Phone 3-3993 • Richmond 22, Va.

McGUIRE CLINIC

ST. LUKE'S HOSPITAL

RICHMOND, VIRGINIA

General Medicine

HUNTER H. McGUIRE, M.D.
MARGARET NOLTING, M.D.
JOHN P. LYNCH, M.D.
WM. H. HARRIS, JR., M.D.
JOHN B. CATLETT, M.D.

Orthopedic Surgery

JAMES T. TUCKER, M.D.
BEVERLEY B. CLARY, M.D.
EARNEST B. CARPENTER, M.D.

Ophthalmology, Otolaryngology

FRANCIS H. LEE, M.D.

General Surgery

WEBSTER P. BARNES, M.D.
JOHN H. REED, JR., M.D.
JOHN ROBERT MASSIE, JR., M.D.
JOSEPH W. COXE III, M.D.

Dental Surgery

JOHN BELL WILLIAMS, D.D.S.
GUY R. HARRISON, D.D.S.

Urology

AUSTIN I. DODSON, M.D.
CHAS. M. NELSON, M.D.
AUSTIN I. DODSON, JR., M.D.

Pediatrics

HUBERT T. DOUGAN, M.D.

Obstetrics

W. HUGHES EVANS, M.D.
W. H. COX, M.D.
JAMES M. WHITFIELD, M.D.

Bronchoscopy

GEORGE AUSTIN WELCHONS, M.D.

Roentgenology

JESSE N. CLORE, JR., M.D.
STUART J. EISENBERG, M.D.

Pathology

J. H. SCHERER, M.D.

Treasurer: RICHARD J. JONES, BS., C.P.A.



ELECTRON PHOTOMICROGRAPH

Escherichia coli 36,000 X

Escherichia coli ("colon bacillus") is a Gram-negative organism
commonly involved in
urinary tract infections and peritonitis,
and is an important etiologic agent of otitis media, mastoiditis, enteritis,
and septicemia in infants.

It is another of the more than 30 organisms susceptible to

PANMYCIN* HCl

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

*TRADEMARK, REG. U. S. PAT. OFF.

Upjohn

STUART CIRCLE HOSPITAL

413-21 Stuart Circle
RICHMOND, VIRGINIA

Medicine:
Manfred Call, III, M.D.
M. Morris Pinckney, M.D.
Alexander G. Brown, III, M.D.
John D. Call, M.D.
Wyndham B. Blanton, Jr., M.D.

Obstetrics and Gynecology:
Wm. Durwood Suggs, M.D.
Spotswood Robins, M.D.
Edwin B. Parkinson, M.D.

Orthopedics:
Beverley B. Clary. M.D.

Pediatrics:
Charles P. Mangum, M.D.
Edward G. Davis, Jr.. M.D.

Ophthalmology. Otolaryngology:
W. L. Mason. M.D.

Pathology:
Regena Beck, M.D.

Anesthesiology
William B. Moncure, M.D.
Heth Owen. Jr.. M.D.

Surgery:
A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr.. M.D.

Urological Surgery:
Frank Pole, M.D.

Oral Surgery:
Guy R. Harrison, D.D.S.

Plastic Surgery:
Hunter S. Jackson, M.D.

Roentgenology and Radiology:
Fred M. Hodges, M.D.
L. O. Snead, M.D.
Hunter B. Frischkorn, Jr., M.D.
William C. Barr. M.D.

Physiotherapy:
Miss Etheleen Dalton

Director:
Charles C. Hough

ST. ELIZABETH'S HOSPITAL

RICHMOND 20, VIRGINIA

STAFF

Guy W. Horsley, M.D.	General Surgery and Gynecology
D. Coleman Booker, M.D.	General Surgery and Gynecology
Austin I. Dodson, M.D.	Urology
Austin I. Dodson, Jr., M.D.	Urology
J. Edward Hill, M.D.	Urology
Douglas G. Chapman, M.D.	Internal Medicine
Eimer S. Robertson, M.D.	Internal Medicine
T. E. Stanley, M.D.	Internal Medicine
Fred M. Hodges, M.D.	Roentgenology
L. O. Snead, M.D.	Roentgenology
Hunter B. Frischkorn. Jr.. M.D.	Roentgenology
Helen Lorraine	Medical Illustration

ADMINISTRATION

William Scott	Business Manager

SCHOOL OF NURSING

The School of Nursing is affiliated with The Johns Hopkins Hospital School of Nursing for a three months' course each in Pediatrics and Obstetrics, and with the Tucker's Hospital in Richmond for a 12 weeks course in Psychiatry.

Address: Superintendent of Nurses

RIVERSIDE HOSPITAL, Newport News, Va.



A General Hospital (265 beds) with Departments in Medicine, Surgery, Obstetrics, Pathology, Radiology, Pediatrics and Nursing. The Hospital is accredited by the Council on Medical Education of the American Medical Association for training first year interns, residencies in the surgical specialties for one and two years, general practices two years full approval, internal medicine, and obstetrics and gynecology, and the School of Nursing is accredited by the Virginia State Board of Nurse Examiners.

DAVID E. WATSON,
Administrator

MISS MARY LOUISE HABEL, R.N.,
Director, School of Nursing

Gill Memorial Eye, Ear and Throat Hospital

Announces to the Profession

TWENTY-EIGHTH ANNUAL SPRING CONGRESS

in

OPHTHALMOLOGY AND OTOLARYNGOLOGY

April 4 to April 9, 1955

GUEST SPEAKERS

Henry L. Birge, M.D. ..... Hartford, Conn.
Paul Boeder, M.D. ..... South Bridge, Mass.
William B. Clark, M.D., F.A.C.S. ..... New Orleans, La.
Dan M. Gordon, M.D. ..... New York, N. Y.
Anderson C. Hilding, M.D. ..... Duluth, Minn.
Chevalier L. Jackson, M.D. ..... Philadelphia, Pa.
Bertha S. Klien, M.D. ..... Chicago, Ill.
Walter E. Loch, M.D. ..... Baltimore, Md.
T. G. Martens, M.D. ..... Rochester, Minn.
Daniel S. Miller, M.D. ..... Boston, Mass.
Thomas Paine, M.D. ..... Ann Arbor, Mich.
Major General Daniel Ogle, M.D. ..... Washington, D. C.
R. Townley Paton, M.D., F.A.C.S. ..... New York, N. Y.
James Purnell, M.D. ..... New York, N. Y.
Albert D. Ruedemann, M.D., F.A.C.S. ..... Detroit, Mich.
Robert E. Ryan, M.D. ..... St. Louis, Mo.
Richard Schneider, M.D. ..... Ann Arbor, Mich.
John Sheldon, M.D. ..... Ann Arbor, Mich.
G. Edward Tremble, M.D. ..... Montreal, Canada
Grant Ward, M.D. ..... Baltimore, Md.

For further information write:

Superintendent, Box 1789 **Roanoke, Virginia**

RICHMOND EYE HOSPITAL
RICHMOND EAR, NOSE AND THROAT HOSPITAL
(COMBINED)

RICHMOND, VIRGINIA



A new non-profit Community Hospital specially constructed for the treatment of Eye, Ear, Nose and Throat Diseases, including Laryngeal Surgery, Bronchoscopy and Plastic Surgery of the Nose.

Professional care offered a limited number of charity patients.

ADDRESS: JULIA WAGNER WATERS, R.N., *Administrator* 408 North 12th Street

Third Decade of Nursing

MODERN IN EQUIPMENT

MRS. PLYLER'S

KATE E. PLYLER (1876-1947)

OLD IN TRADITION

NURSING HOME

MARY INGRAM CLARK

CONVALESCENT — CHRONIC — AGED

- Equipped for oxygen and transfusions
- 30 special & general nurses
- 24-hour nursing care
- Centrally located
- 50-bed capacity
- Dietician
- Rates from $42.00 to $70.00 per week for room, board and general nursing care.





For further information write or call MRS. GENE CLARK REGIRER, Supt.

1613-15-17 Grove Avenue—Richmond, Virginia—Telephone 84-3221

MEDICINE IN VIRGINIA

17th, 18th and 19th Centuries

Reduced Price to Members of
The Medical Society of Virginia

3 Volumes for $5.75

Order Through

THE MEDICAL SOCIETY OF VIRGINIA
P. O. Box 5085 Richmond 20, Va.

THE LOUISE C. GODWIN NURSING HOME, INC.

"Nursing care with kindness"

AGED AND CHRONICALLY ILL
MODEST RATES

LOUISE GODWIN TAYLOR, R.N., Pres.
MARGARET K. MILLER, Sec.-Treas.

Bus. 55514 813 Stockley Gardens
Res. 83046 Norfolk 7, Virginia

GRADE A PASTEURIZED PRODUCTS

GARST BROS. DAIRY INC.

DIAL 5501

GRADE A MILK
HOMOGENIZED MILK (Natural Vitamin D added)
GOLDEN GUERNSEY MILK
GOLDEN FLAKE BUTTERMILK
SKIM MILK—COFFEE CREAM
WHIPPING CREAM—COTTAGE CHEESE
DARI-RICH CHOCOLATE MILK
GARST BROS. DAIRY BUTTER

"ROANOKE'S MOST MODERN DAIRY"

DIAL 5501

LABORATORY CONTROL
FOR YOUR PROTECTION

THE NEW YORK POLYCLINIC
MEDICAL SCHOOL AND HOSPITAL

(Organized 1881)

(The Pioneer Post-Graduate Medical Institution in America)

SURGERY and ALLIED SUBJECTS

A two months full time combined surgical course comprising general surgery, traumatic surgery, abdominal surgery, gastroenterology, proctology, gynecological surgery, urological surgery. Attendance at lectures, witnessing operations, examination of patients preoperatively and postoperatively and follow-up in the wards postoperatively. Pathology, radiology, physical medicine, anesthesia. Cadaver demonstrations in surgical anatomy, thoracic surgery, proctology, orthopedics. Operative surgery and operative gynecology on the cadaver. Attendance at departmental and general conferences.

RADIOLOGY

A comprehensive review of the physics and higher mathematics involved, film interpretation, all standard general roentgen diagnostic procedures, methods of application and doses of radiation therapy, both x-ray and radium, standard and special fluoroscopic procedures. A review of dermatological lesions and tumors susceptible to roentgen therapy is given, together with methods and dosage calculation of treatments. Special attention is given to the newer diagnostic methods associated with the employment of contrast media, such as bronchography with Lipiodol, uterosalpingography, visualization of cardiac chambers, perirenal insufflation and myelography. Discussions covering roentgen departmental management are also included; attendance at departmental and general conferences.

EYE, EAR, NOSE and THROAT

A nine months combined full time refresher course consisting of attendance at clinics, witnessing operations, lectures, demonstration of cases and cadaver demonstrations; operative eye, ear, nose and throat on the cadaver; clinical and cadaver demonstrations in bronchoscopy, laryngeal surgery and surgery for facial palsy; refraction; radiology; pathology, bacteriology and embryology; physiology; neuro-anatomy; anesthesia; physical medicine; allergy; examination of patients pre-operatively and follow-up post-operatively in the wards and clinics.

Course for GENERAL PRACTITIONERS

Intensive full time instruction covering those subjects which are of particular interest to the physician in general practice. Fundamentals of the various medical and surgical specialties designed as a practical review of established procedures and recent advances in medicine and surgery. Subjects related to general medicine are covered and the surgical departments participate in giving fundamental instruction in their specialties. Pathology and radiology are included. The class is expected to attend departmental and general conferences.

For Information concerning these and other Courses please Address:

THE DEAN, 345 West 50th St., New York 19. N. Y.


For Nasal Congestion
in THE COMMON COLD
Physiologically acceptable Neo-Synephrine hydrochloride solution promptly constricts the engorged nasal capillaries which are responsible for nasal congestion in the common cold. When the nasal mucosa is reduced to its normal state, the nasal passages resume their proper patency, drainage is possible, and the patient can again breathe freely.
By its shrinking action on the nasal mucosa, Neo-Synephrine helps to keep the sinuses aerated and the openings to the eustachian tubes clear.
Neo-Synephrine within minutes produces decongestion that lasts for hours.
NEO-SYNEPHRINE®
Hydrochloride
0.25%, 0.5% and 1% Solution
New: Nasal Spray — Plastic Squeeze Bottle
Winthrop-Stearns INC. NEW YORK 18, N.Y. WINDSOR, ONT.
Neo-Synephrine
(brand of phenylephrine),
trademark reg. U.S. Pat. Off.



ELECTRON PHOTOMICROGRAPH

Streptococcus pyogenes 36,000 X

Streptococcus pyogenes is a Gram-positive organism commonly involved in a great variety of pathologic conditions, including

scarlet fever • tonsillitis • pharyngitis • otitis media • sinusitis
bronchopulmonary disease • pyoderma • empyema • septicemia • meningitis
mastoiditis • vaginitis • rheumatic fever • acute glomerulonephritis

It is another of the more than 30 organisms susceptible to

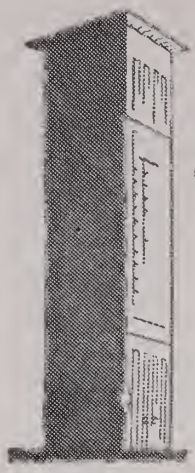
PANMYCIN* HCl

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U. S. PAT. OFF.



1st

In Virginia

FIRST AND MERCHANTS
NATIONAL BANK OF RICHMOND
MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

The American Way

is peace, prosperity, and goodwill toward our fellow man—to invest our time in educating and learning; and our money in good citizens and fine institutions.



One of the finest institutions of your State is Richmond Hotels Incorporated, one that maintains the highest modern hotel standards . . . one that combines the hospitality and charm of the old and the convenience and comfort of the new.

John Marshall William Byrd
King Carter Richmond

Richmond Hotels Incorporated

Patients on "Premarin" therapy experience prompt relief of menopausal symptoms and a highly gratifying "sense of well-being."

"Premarin"® —Conjugated Estrogens (equine)

6512

Meat...

and the Therapeutic Protein Dietary

For many years clinicians and surgeons have recognized the therapeutic value of the high protein dietary.

In more than normal amounts, protein is essential in the treatment of many diseases characterized by hypoproteinemia[1]—nephrosis,[2] sprue, pellagra, chronic colitis, certain liver afflictions,[3] anorexia of diverse etiologies. High protein intake helps to stabilize tissue protein in diseases in which protein catabolism is increased, such as hyperthyroidism and protracted high fever. Dietaries high in protein promote wound healing in the surgical patient and speed convalescence.[4] Sufficient protein ingestion constitutes a protective measure in the geriatric patient.[5] Large amounts of protein are required to satisfy the growth and other metabolic needs of the pediatric patient.

Meat provides large quantities of protein highly effective in the body economy—tissue growth and maintenance, formation of antibodies, enzymes, and protein hormones, and regulation of fluid balance. It also supplies valuable amounts of B vitamins and essential minerals including iron, phosphorus, and potassium. Appeal to the palate, easy digestibility, and its nutrient contribution make meat an important component of therapeutic diets.

---

1. Taggart, H. A.: Protein Metabolism in Relation to Nutritional Aspects of Medical Diseases, Pennsylvania M.J. *54*:339 (1951).
2. Marquardt, G. H.; Cummins, G. M., and Fisher, C. I.: Blood Protein Replenishment in Treatment of Nephritic Edema, Quart. Bull. Northwestern Univ. M. School *26*:140 (1952).
3. Kark, R. M.: Low Sodium and High Protein Diets in Laennec's Cirrhosis, M. Clin. North America *35*:73 (1951).
4. Kekwick, A.: Protein Deficiency in Surgical Patients, Ann. Roy. Coll. Surgeons England *7*:390 (1950).
5. Stieglitz, E. J.: Nutrition Problems of Geriatric Medicine, Report of Council on Foods and Nutrition, J.A.M.A. *142*:1070 (Apr. 8) 1950.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

American Meat Institute

Main Office, Chicago... Members Throughout the United States

"¡Valiente!" cried the Spanish admiral



He cheered as his launch fished this man and seven more waterlogged American sailors out of Santiago Harbor, Cuba, on the morning of June 4, 1898. This was straining Spanish chivalry to the breaking point, for Richmond Hobson (right) and his little suicide crew had spent the previous night taking a ship into the harbor entrance under a hail of cannonade and deliberately sinking her to bottle up the Spanish fleet.



Hobson was actually an engineer, not a line officer. In Santiago Harbor, he led his first and only action against the enemy. But his cool-headed daring made him as much a hero of the day as Admiral Dewey. And proved again that America's most valuable product is Americans.

These Americans—proudly confident of their nation's future—are the people who stand behind United States Series E Savings Bonds. They are the people who, by their spirit and abilities, make these Bonds one of the world's finest investments.

That's why there's no better way to protect *your* future than by investing in *America's* future! Buy Bonds regularly!

★ ★ ★

It's actually easy to save money—when you buy United States Series E Savings Bonds through the automatic Payroll Savings Plan where you work! You just sign an application at your pay office; after that your saving is done for you. And the Bonds you receive will pay you interest at the rate of 3% per year, compounded semiannually, for as long as 19 years and 8 months if you wish! Sign up today! Or, if you're self-employed, invest in Bonds regularly where you bank. There's no surer place to put your money, for United States Savings Bonds are as safe as America!

For your own security—and your country's, too—
invest in U. S. Savings Bonds!

The U. S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.

Thank you doctor for telling mother about...



The Best Tasting Aspirin you can prescribe

The Flavor Remains Stable down to the last tablet

15¢ Bottle of 24 tablets (2½ grs. each)

We will be pleased to send samples on request

THE BAYER COMPANY DIVISION of Sterling Drug Inc., 1450 Broadway, New York 18, N. Y.

The Place of Enriched Bread in the Reducing Diet

It is universally acknowledged that the only effective means of weight reduction is restriction of caloric intake. Furthermore, it is acknowledged that no single food can be branded as fattening, that the solution to the problem is sensible limitation of the amounts of all foods eaten.

That enriched bread has a place in the modern reducing diet is evidenced by its inclusion in many weight reduction programs recommended by authorities in the fields of metabolism and internal medicine. Such a diet has recently been included in a pamphlet published by one of the nationwide organizations concerned with national health and the increasing problem of obesity.

This diet, a conventional reducing diet providing 1,200 to 1,400 calories per day, allows a balanced variety of basic foods including bread. Note the sample menu.

Enriched bread is far more than just a carbohydrate food, as is often the mistaken concept. Moreover, in itself, it is not a "fattening food," since only the calorically excessive diet can induce increase in body weight. Three slices of enriched bread provide only 189 calories, yet this amount makes a worthwhile contribution of biologically applicable protein, B group vitamins, and valuable minerals including iron and calcium. Of even greater importance to the person dieting is the gustatory attractiveness which bread lends to the meal.

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.



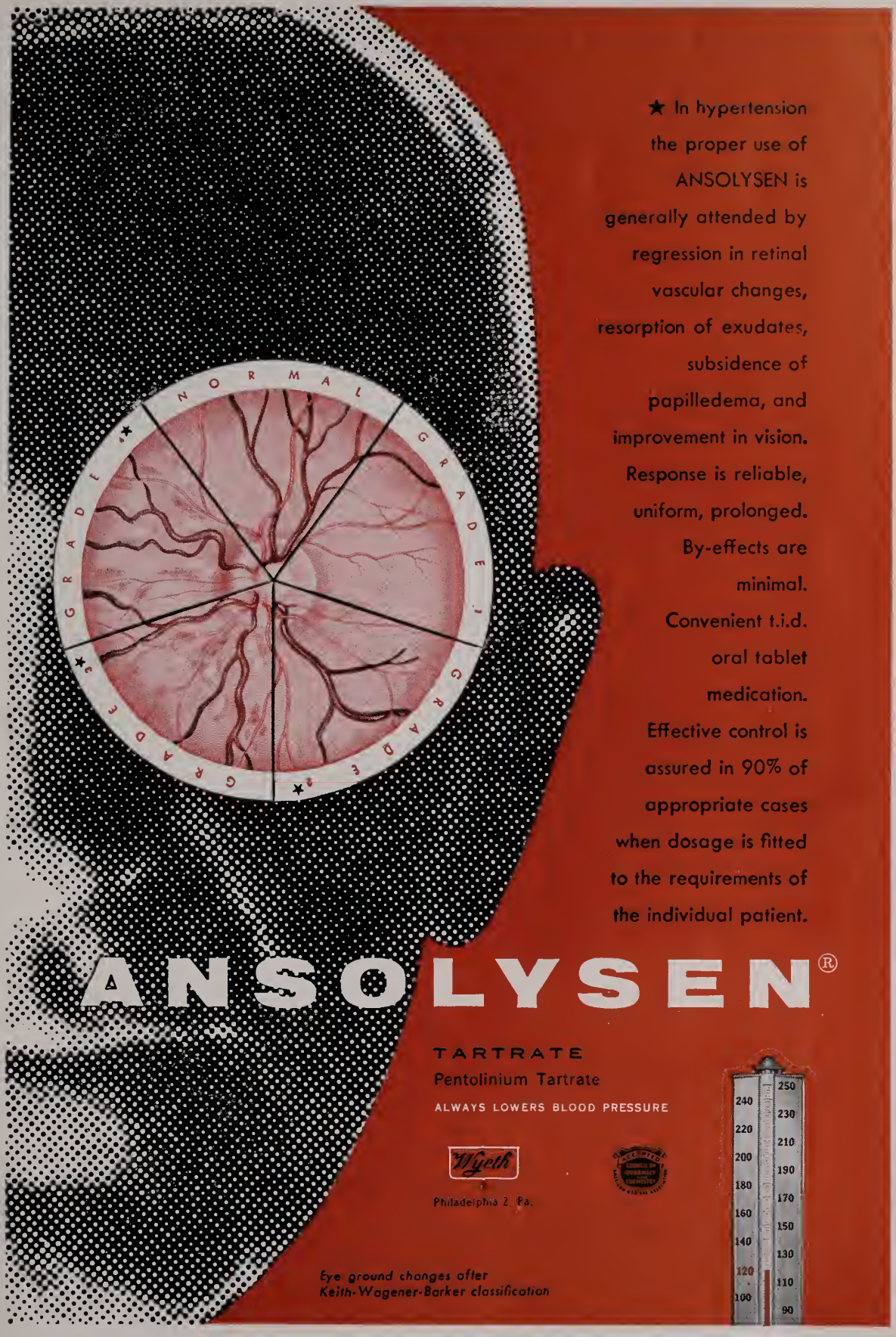
BREAKFAST
4 ounces tomato juice
1 boiled egg — 1 slice of toast
1 teaspoon butter — Coffee with milk

LUNCH
Liverwurst sandwich
(1 ounce meat, mustard, lettuce)
Celery — Small bunch grapes
1 cup of milk

DINNER
Roast chicken (3 slices, or 3 ounces)
Broccoli — 1 teaspoon butter
Asparagus — Fresh fruit cup
Tomato-cucumber salad, vinegar — Coffee or tea with milk

BEDTIME
Orange or ½ banana — ½ cup milk

THE VIRGINIA BAKERS COUNCIL
In co-operation with
THE AMERICAN BAKERS ASSOCIATION



★ In hypertension the proper use of ANSOLYSEN is generally attended by regression in retinal vascular changes, resorption of exudates, subsidence of papilledema, and improvement in vision. Response is reliable, uniform, prolonged. By-effects are minimal. Convenient t.i.d. oral tablet medication. Effective control is assured in 90% of appropriate cases when dosage is fitted to the requirements of the individual patient.

ANSOLYSEN®

TARTRATE

Pentolinium Tartrate

ALWAYS LOWERS BLOOD PRESSURE

Wyeth

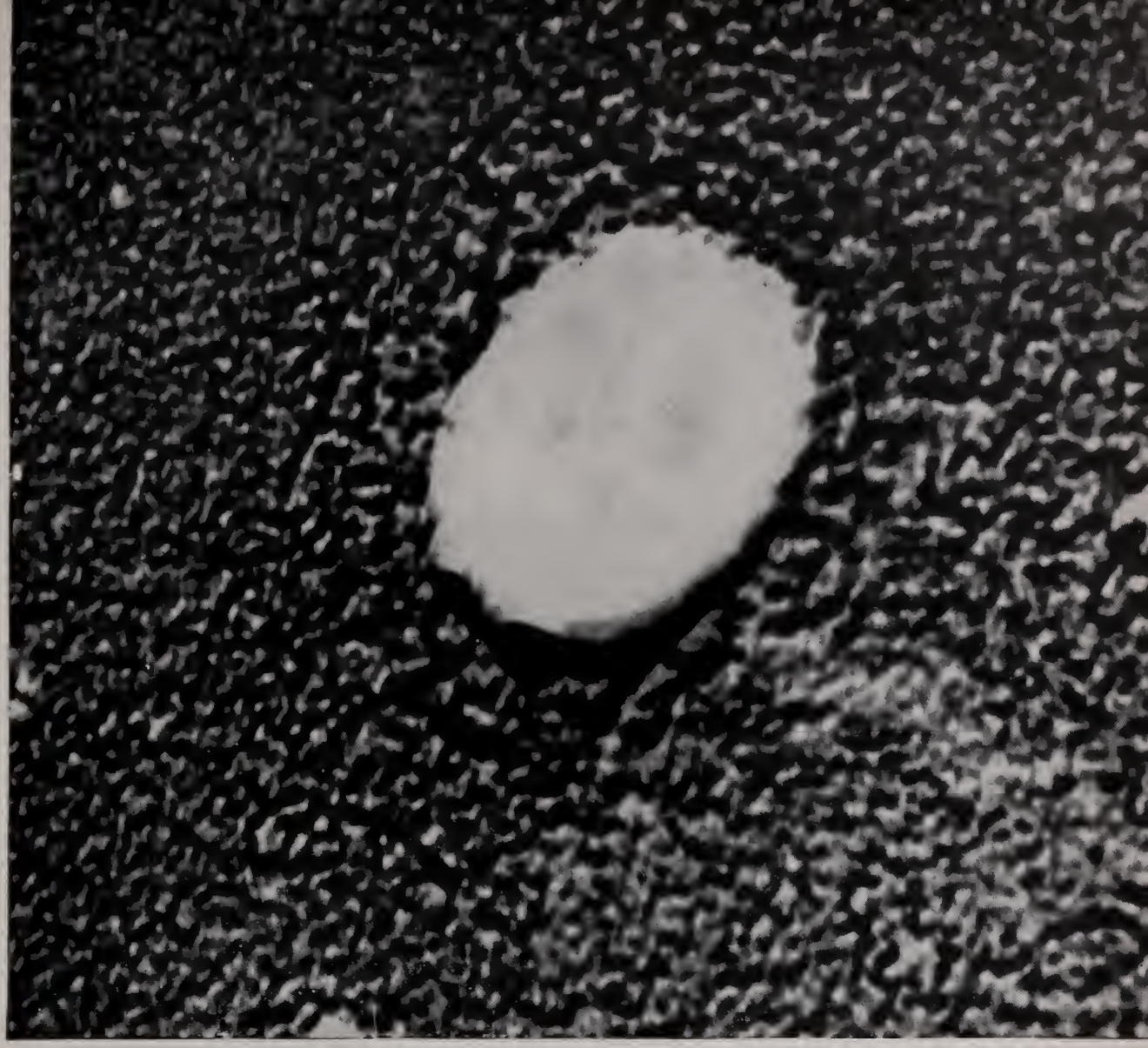
Philadelphia 2, Pa.

Eye ground changes after Keith-Wagener-Barker classification

Component and Other Medical Societies in Virginia

(Officers and Others are Requested to Notify the **Monthly** of Changes)

SOCIETY	PRESIDENT	SECRETARY	TIME OF MEETING
Accomac County	William C. Fritz Onancock	J. C. Doughty, Onancock	Quarterly
Albemarle County	E. C. Drash, Charlottesville	Cary Moon, Charlottesville	Monthly
Alexandria	C. J. Murphy, Jr., Alexandria	T. F. McGough, Alexandria	Monthly
Alleghany-Bath Counties	S. G. Miller, Covington	R. P. Hawkins, Jr., Clifton Forge	Bi-Monthly
Amherst-Nelson Counties	Lyddane Miller, Amherst	———	
Arlington County	H. C. Bates, Jr., Arlington	S. J. Sheehy, Arlington	Monthly
Augusta County	William Lueders, Jr., Staunton	J. T. Obenschain, Waynesboro	Quarterly
Bedford County	W. G. Hardy, Bedford	Dennis Robinson, Bedford	Quarterly
Botetourt County	M. S. Stinnett, Buchanan	E. L. Coffey, Buchanan	
Buchanan-Dickenson Counties	J. P. Williams, Richlands	J. S. Richardson, Grundy	Monthly
Charlotte County	Stuart Wilson Tuggle, Keysville	Thos. Watkins, Drakes Branch	
Culpeper County	O. K. Burnette, Culpeper	Cecil G. Finney, Culpeper	
Danville-Pittsylvania County	J. W. Hooker, Danville	J. D. Beale, Danville	Monthly
Fairfax County	Robert Hunt, Falls Church	William Harris, Falls Church	Quarterly
Fauquier County	Frank Folk, Warrenton	Evan Ashby, Jr., Remington	Monthly
Floyd County	J. C. Rutrough, Willis	F. C. Bedsaul, Floyd	
Fourth District	W. B. McIlwaine, Petersburg	J. G. Graziani, Farmville	Five times a year
Fredericksburg	Joseph MacKnight, Fredericksburg	H. L. Earnhardt, Fredericksburg	Monthly
Halifax County	W. J. Hagood, Clover	G. E. Chappell, Halifax	
Hanover County	J. D. Hamner, Jr., Ashland	Claude K. Kelly, Mechanicsville	
Hampton	Paul J. Parker, Hampton	R. H. Wright, Jr., Phoebus	Semi-Monthly
Hopewell	C. H. Dougherty, Hopewell	W. P. Youngblood, Hopewell	
James River	Williams S. Lloyd, Goochland	J. H. Yeatman, Fork Union	Quarterly
Lee County	C. C. Carr, Pennington Gap	H. A. Kinser, Pennington Gap	
Loudoun County	———	Samuel Morrison, Leesburg	Monthly
Louisa County	E. B. Pendleton, Cuckoo		
Lynchburg Acad. Med.	J. R. Saunders, Lynchburg	Frank N. Buck, Lynchburg	Monthly
Med. Soc. of Va.	Carrington Williams, Richmond	R. I. Howard, Richmond	October 16-19, Richmond
Mid-Tidewater	Thomas E. Smith, Hayes	M. H. Harris, West Point	Quarterly
Montgomery County	R. H. Grubbs, Christiansburg	D. D. Chiles, Radford	
Norfolk County	C. J. Devine, Norfolk	Donald T. Faulkner, Norfolk	Semi-Monthly
Northampton County	J. R. Hamilton, Nassawadox	Thos. Hardman, Cape Charles	Quarterly
Northern Neck	N. R. Tingle, Nuttsville	J. M. Dailey, Reedville	Semi-Annually
Northern Virginia	E. L. Hopewell, Strasburg	Dennis McCarty, Front Royal	Three times a year
Orange County	David H. Miller, Orange	J. G. Bruce, Jr., Gordonsville	
Patrick-Henry County	F. T. Renick, Martinsville	T. H. Dickerson, Martinsville	Quarterly
Princess Anne County	Ralph Stata, Oceana	James W. Todd, Virginia Beach	
Richmond Acad. Med.	R. D. Butterworth, Richmond	Patty Boatwright, Richmond	Semi-Monthly
Roanoke Academy	Allen Barker, Roanoke	Horace Albertson, Roanoke	Monthly
Rockbridge County	T. B. Hedrick, Buena Vista	E. W. Bosworth, II, Lexington	Monthly
Rockingham County	P. W. Nash, Timberville	W. J. Hotchkiss, Broadway	Quarterly
Russell County	R. F. Gillespie, Lebanon	W. A. Davis, Dante	
Scott County	W. L. Griggs, Jr., Gate City	———	
Smyth County	Jos. J. Eller, Marion	Jas. A. Soyars, Saltville	
Southwestern Virginia	C. C. Hatfield, Saltville	R. Jones, Roanoke	Semi-annually
Tazewell County	W. T. Henderson, Richlands	Mary E. Johnston, Tazewell	Quarterly
Tri-County	W. H. Chapman, Jr., Suffolk	L. J. Stetson, Suffolk	Monthly
Tri-State Med. Assn.	F. E. Kredel, Charleston, S.C.	R. B. Davis, Greensboro, N. C.	February 21-22, 1955
Va. Sec. Amer. Col. Phys.	A. F. Robertson, Staunton	J. F. Waddill, Norfolk	October 1955
Va. Acad. Gen. Practice	R. M. Reynolds, Norfolk	C. W. Meador, Richmond	May 13-15, 1955
Va. Chest Physicians	C. W. Meador, Richmond	———	May 13-15, 1955
Va. Diabetes Assn.	T. S. Edwards, Charlottesville	J. F. Conner, Kecoughtan	October 1955
Va. Neuropsychiatric	G. L. Jones, Williamsburg	Frank Strickler, Roanoke	Quarterly
Va. Obst. & Gynec. Soc.	E. S. Groseclose, Roanoke	C. D. Bradley, Newport News	October 1955
Va. Orthopedic Soc.	Allen M. Ferry, Arlington	Wm. Deyerle, Richmond	October 1955
Va. Soc. of Pathology	Edward Levy, Norfolk	Geo. J. Carroll, Suffolk	October 1955
Va. Pediatric Soc.	E. L. Kendig, Jr., Richmond	William Spencer, Richmond	
Va. Peninsula Acad.	O. W. Ward, Sr., Hampton	Wm. Watkins, Newport News	Monthly
Va. Radiological Soc.	Geo. Cooper, Charlottesville	P. B. Parson, Norfolk	
Va. Soc. Anesthesiologists	W. E. Pembleton, Richmond	John Rosenthal, Norfolk	
Va. Soc. O. L. & O.	———	———	May 6-7, 1955
Va. Surgical Soc.	Randolph Hoge, Richmond	R. L. Payne, Jr., Norfolk	October 1955
Va. Urological Soc.	T. B. Washington, Richmond	Wm. R. Jones, Jr., Richmond	
Warwick-Newport News	T. W. Tankard, Warwick	F. S. Beazlie, Jr., Newport News	Monthly
Williamsburg-Jas. City	E. B. Kilby, Toano	Linwood Farley, Wliamsburg	2nd Wed. except June, July & Aug.
Wise County	T. J. Tudor, Norton	L. N. Kirch, Norton	Bi-Monthly



ELECTRON PHOTOMICROGRAPH

Shigella dysenteriae 42,000 X

Shigella dysenteriae (Shiga's bacillus) is a Gram-negative organism which causes bacillary dysentery.

It is another of the more than 30 organisms susceptible to

PANMYCIN* HCl

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U. S. PAT. OFF.

Planning the Low-Purine Diet for a long run...

Imagination is essential to this diet since your patient may have to follow it for many years. These diet "do's" can show him how to use eggs, cheese, and milk—a trio of almost purine-free foods—to supply the major portion of his protein.

In these, the trio plays a solo—

Eggs baked in pimiento-flecked cheese sauce are hard to resist. Or, if your patient prefers, the sauce can be poured over hard-cooked eggs.

A casserole of eggplant and tomatoes layered alternately with ricotta or cottage cheese makes a satisfying entree. Add a sprinkle of grated parmesan with a fine Italian hand.

Your patient may like his eggs poached in tomato juice. Then serve them in a soup bowl with a frill of chopped parsley on top.

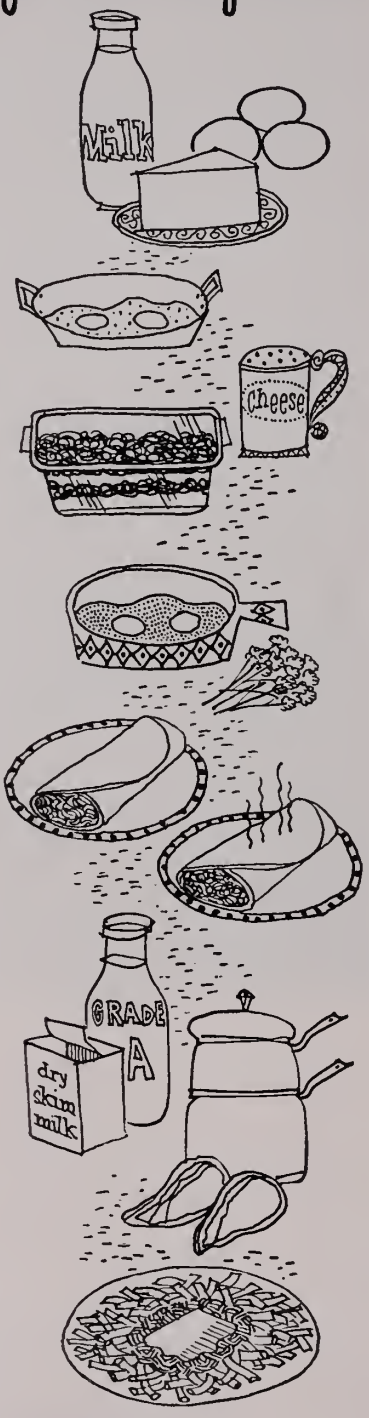
In these, the trio plays accompaniment—

Ham 'n' egg rolls come hot or cold. For hot, roll a warm slice of ham around eggs that have been scrambled with a pinch of savory. For cold, roll ham around egg salad mixed with cottage cheese.

Oyster stew can be creamy without cream when the milk is bolstered with dry skim milk powder. A pinch of thyme and some chopped parsley add savor.

Broiled salmon or tuna-burgers nestle nicely in a nest of noodles. A slice of cheese on top adds color and broils to a bubbling brown.

These suggestions are only a few of the possible combinations of this versatile trio. And the adequate protein nutrition they make possible, plus a liberal intake of fluids, may help establish a regimen that will please you both.



United States Brewers Foundation

Beer—America's Beverage of Moderation

104 calories, 17 mg. sodium/8 oz. glass (Average of American beers)

If you'd like reprints for your potients, please write United States Brewers Foundation, 535 Fifth Avenue, New York 17, N. Y.

"an effective antirheumatic agent"*

nonhormonal anti-arthritic

BUTAZOLIDIN®

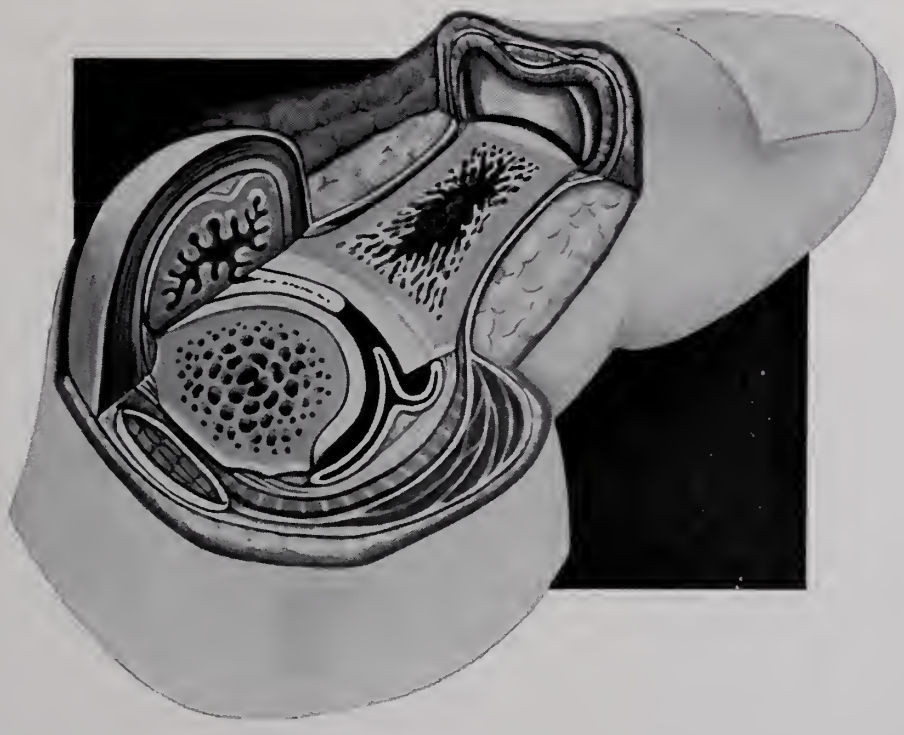
(brand of phenylbutazone)

relieves pain • improves function • resolves inflammation

The standing of BUTAZOLIDIN among today's anti-arthritics is attested by more than 250 published reports. From this combined experience it is evident that BUTAZOLIDIN has achieved recognition as a potent agent capable of producing clinical results that compare favorably with those of the hormones.

Indications: Gouty Arthritis Rheumatoid Arthritis Psoriatic Arthritis
Rheumatoid Spondylitis Painful Shoulder Syndrome
BUTAZOLIDIN® (brand of phenylbutazone) red coated tablets of 100 mg.

*Bunim, J. J.: Research Activities in Rheumatic Diseases. Pub. Health Rep. 69:437, 1954.



Geigy GEIGY PHARMACEUTICALS

Division of Geigy Chemical Corporation, 220 Church Street, New York 13, N.Y.



because safety and nutritional effectiveness count so very much

specify DEXTRI-MALTOSE

MANUFACTURED SPECIFICALLY FOR INFANT FORMULAS

Dextri-Maltose is specifically designed for infant formulas—*and only infant formulas.* Unlike many milk modifiers, Dextri-Maltose is palatable but not sweet. It does not cloy the appetite. Infants fed Dextri-Maltose formulas do not develop a "sweet tooth" which may cause later resistance to essential foods.

The dextrins and maltose in Dextri-Maltose, plus the lactose of milk, give the infant a mixture of *three* different carbohydrates. These are broken down at different rates in the intestinal tract. Absorption is gradual. Sudden fluctuations in blood sugar levels are prevented.

Dextri-Maltose® is always kept safe and dependable through meticulous quality control. No other carbohydrate used in infant feeding has such a background of acceptance and dependability.



the importance of adequate added carbohydrate

Added carbohydrate provides calories needed to spare protein for tissue building, to permit proper fat metabolism and promote good water balance. Authorities on infant feeding recommend the addition of about 5% carbohydrate to milk and water mixtures. This proportion of carbohydrate is obtained by adding 1 tablespoon of Dextri-Maltose to each 5 or 6 ounces of fluid.

MEAD JOHNSON & COMPANY
EVANSVILLE, INDIANA, U.S.A.

MEAD

OFFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

VIRGINIA MEDICAL MONTHLY

Contents

The Physicians Responsibility in the Prevention of Automobile Accidents and Deaths, Fletcher D. Woodward and Cary N. Moon . . . 169

The Medical Management of Hyperthyroidism, Ernest H. Yount . . . 173

Phenylbutazone (Butazolidin) in the Treatment of Various Rheumatic Disorders, Paul H. Wornom and Oscar Swineford . . . 176

Intra-Orbital Tumors and Progressive Exophthalmos, Winchell McK. Craig . . . 182

General Considerations of Cortisone and ACTH Therapy, Stuart H. Catron, Jr. . . . 186

Intestinal Obstruction Due to Metastatic Melanotic Sarcoma Nine Years After Removal of Primary Tumor, Maurice A. Michael . . . 190

(Continued on page 6)

APR -5 1955
LIBRARY

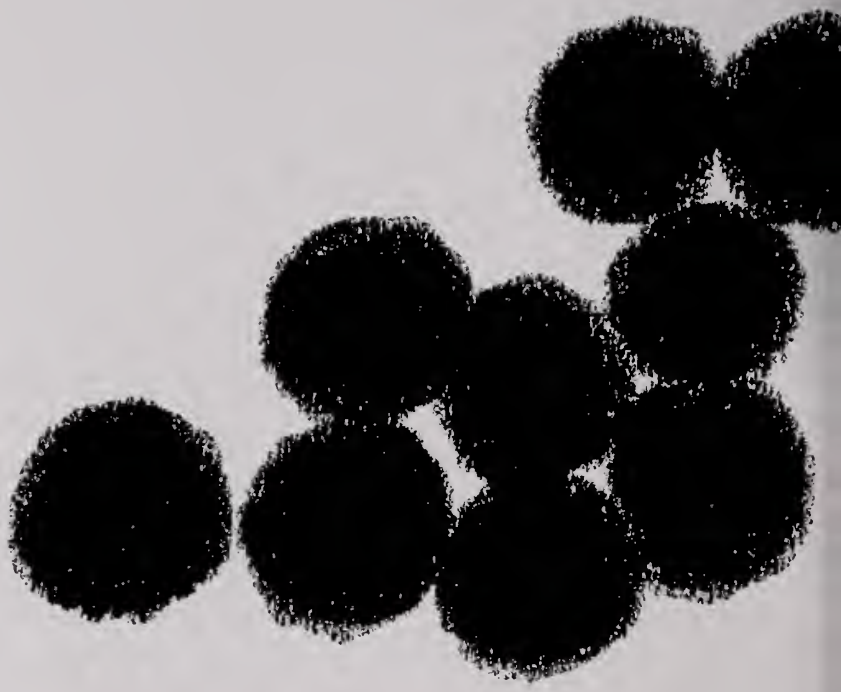
consider
ILOTYCIN
(ERYTHROMYCIN, LILLY)
FIRST

wide clinical range:
80 percent of all bacterial infections and 96 percent of all acute bacterial respiratory infections respond readily

notably safe, well tolerated

Lilly

APRIL, 1955



to combat resistant bacteria...







Chloromycetin®

The rising incidence of bacterial resistance to various antibiotics constitutes a serious therapeutic problem. Many infections, once readily controlled, are now proving difficult to combat. Administration of CHLOROMYCETIN (chloramphenicol, Parke-Davis) is often useful in these cases because this notable, broad-spectrum antibiotic is frequently effective where other antibiotics fail.

"...An advantage of CHLOROMYCETIN appears to be its relatively low tendency to induce sensitization in the host or resistance among potential pathogens under clinical conditions."*

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

*Pratt, R., & Dufrenoy, J.: Texas Rep. Biol. & Med. *12*:145, 1954.

PARKE, DAVIS & COMPANY • DETROIT 32, MICHIGAN

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April 1874)

Published monthly by The Medical Society of Virginia.

PUBLICATION COMMITTEE

Lewis H. Bosher, Jr., M.D., *Chairman and Editor*
Wyndham B. Blanton, M.D. Lloyd B. Burk, M.D.
with
EDITORIAL BOARD
J. Morrison Hutcheson, M.D.
Cato Drash, M.D.
Ennion S. Williams, M.D.
A. Brownley Hodges, M.D.
Hugh H. Trout, Jr., M.D.

The MONTHLY is not responsible for the opinions and statements of its contributors.

All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

Managing Editor—E. SPENCER WATKINS
1105 West Franklin Street, Richmond 20.

Annual Subscription—$2.00 Single Copies—25¢

Entered as Second Class Matter at the Postoffice, Richmond, Virginia, under the Act of March 3, 1879.

THE MEDICAL SOCIETY OF VIRGINIA

OFFICERS

President—CARRINGTON WILLIAMS, M.D., Richmond

President-Elect—JAMES P. KING, M.D., Radford

Vice-Presidents—JAMES W. LOVE, M.D., Alexandria
WAVERLY R. PAYNE, M.D., Newport News
BENJAMIN W. RAWLES, JR., M.D., Richmond

Executive Secretary-Treasurer—ROBERT I. HOWARD, Richmond

Councilors—A. A. CREECY, M.D., Newport News
WALTER P. ADAMS, M.D., Norfolk
GUY W. HORSLEY, M.D., Richmond
W. J. OZLIN, M.D., South Hill
L. P. BAILEY, M.D., Nathalie
FRANK A. FARMER, M.D., Roanoke
H. W. MILLER, M.D., Woodstock
MCLEMORE BIRDSONG, M.D., Charlottesville
JAMES P. WILLIAMS, M.D., Richlands
HARRY C. BATES, JR., M.D., Arlington

Delegates to A.M.A.
J. M. HUTCHESON, M.D., Richmond
VINCENT W. ARCHER, M.D., Charlottesville

Alternate Delegates to A.M.A.
ALLEN BARKER, M.D., Roanoke
W. LINWOOD BALL, M.D., Richmond

Executive Office—1105 W. Franklin St., Richmond 20.

INDEX TO ADVERTISERS

Abbott Laboratories 20, 39, 44-45
American Medical Association 38
Ames Company, Inc. ..... Inside Back Cover
Appalachian Hall 29
Audivox 18
Ayerst 13
Baker Laboratories, Inc., The 8
Burroughs Wellcome & Company 36-37
Coca-Cola 13
Corn Products Refining Company 19
Davies, Rose & Co., Ltd. 38
Foot-so-Port Shoe Company 36
Garst Bros. Dairy, Inc. 6
Geigy Pharmaceuticals 17
Gill Memorial Eye, Ear and Throat Hospital, Inc. 32
Godwin Nursing Home, The Louise C. 34
Imperial Car Distributors, Inc. 46
Jefferson, A. G. 38
Johnston-Willis Hospital 29
Lakeside Laboratories, Inc. 42
Lederle Laboratories Division 10-11
Lilly & Co., Eli ..... Front Cover, 24
McGuire Clinic—St. Luke's Hospital 31
Mead Johnson & Company ..... Back Cover
Medical College of Virginia—Hospital Division 29
Medical Society of Virginia—Medicine In Virginia 40
New York Polyclinic Medical School and Hospital, The 6
Parke, Davis & Company 2-3
Patterson's Safe Service Drug Stores 40
People's Service Drug Stores, Inc. 43
Pfizer Laboratories 16
Plyler's Nursing Home, Mrs. 26
Richmond Eye Hospital, Richmont Ear, Nose and Throat Hospital 26
Richmond Hotels, Inc. 36
Riverside Convalescent Home 27
Riverside Hospital 32
Saint Albans Sanatorium 28
Schering Corporation 22-23
Schieffelin & Company 34
Sealy Mattress Company 37
Searle & Company, G. D. 25
Sharp & Dohme 21
State Board of Medical Examiners of Virginia, The 34
St. Elizabeth's Hospital 33
Stuart Circle Hospital 33
Terrace Hill Nursing Home, Inc. 31
Thompson Homestead School, The 34
Tucker Hospital, Inc. 28
United States Brewers Foundation 15
Upjohn 7-35
Valentine Company, Inc. 40
Viceroy Cigarettes 41
Virginia Bakers Council, The 12
Westbrook Sanatorium 27
White Cross Hospital 30
Williams Printing Company 34
Wine Advisory Board 5
Winthrop-Stearns, Inc. 9
Wyeth 14

A Summary of Recent Research*

Wine in Modern Medical Practice

> "...in response to the demand within the medical profession that the true values or deficiencies of wine be ascertained, that there be a clear separation of fact from folklore, and that there be an impartial analysis and study of those features which can be scientifically measured . . . ."*

a series of independently conducted research programs has been in progress for many years under the sponsorship of the Wine Advisory Board of California.

Some of the most important new research findings have been incorporated in a small brochure* specifically written for the medical profession. The booklet considers the role of wine in the treatment of the convalescent and the geriatric patient, as well as its use in the specialized fields of gastroenterology, cardiology, urology, etc. There is mention, too, of the psychobiologic effects of wine, such as its capacity to add a touch of interest and "elegance" to restricted or special dietaries.

A copy* is available to you, at no expense, by writing to:

Wine Advisory Board, 717 Market Street, San Francisco 3, California.

*"Uses of Wine in Medical Practice"



GRADE A PASTEURIZED PRODUCTS

GARST BROS. DAIRY INC.

DIAL 5501

GRADE A MILK
HOMOGENIZED MILK (Natural Vitamin D added)
GOLDEN GUERNSEY MILK
GOLDEN FLAKE BUTTERMILK
SKIM MILK—COFFEE CREAM
WHIPPING CREAM—COTTAGE CHEESE
DARI-RICH CHOCOLATE MILK
GARST BROS. DAIRY BUTTER

"ROANOKE'S MOST MODERN DAIRY"

DIAL 5501

LABORATORY CONTROL
FOR YOUR PROTECTION

THE NEW YORK POLYCLINIC
MEDICAL SCHOOL AND HOSPITAL

(Organized 1881)

(The Pioneer Post-Graduate Medical Institution in America)

UROLOGY

A combined full-time course in Urology, covering an academic year (8 months). It comprises instruction in pharmacology; physiology; embryology; biochemistry; bacteriology and pathology; practical work in surgical anatomy and urological operative procedures on the cadaver; regional and general anesthesia (cadaver); office gynecology; proctological diagnosis; the use of the ophthalmoscope; physical diagnosis; roentgenological interpretation; electrocardiographic interpretation; dermatology and syphilology; neurology; physical medicine; continuous instruction in cystoendoscopic diagnosis and operative instrumental manipulation; operative surgical clinics; demonstrations in the operative instrumental management of bladder tumors and other vesical lesions as well as endoscopic prostatic resection; attendance at departmental and general conferences.

ANESTHESIOLOGY

A three months full time course covering general and regional anesthesia with special demonstrations in the clinics and on the cadaver of caudal, spinal, field blocks, etc.; instruction in intravenous anesthesia, oxygen therapy, resuscitation, aspiration bronchoscopy; attendance at departmental and general conferences.

GYNECOLOGICAL AND OBSTETRICAL PATHOLOGY

A course covering the embryological, physiological and pathological changes, gross and microscopic, occurring in the female genital tract. The above will be illustrated with operative and museum specimens as well as kodachrome and microscopic slides. The newer discoveries in hematology, with particular reference to hemolytic disease of the newborn, blood grouping and transfusion reactions, surgical, sponge and aspiration biopsies.

GENERAL and SPECIAL COURSES in MEDICINE, SURGERY, and ALLIED SUBJECTS

For Information concerning these and other Courses please Address:

THE DEAN, 345 West 50th St., New York 19. N. Y.

CONTENTS

(Continued)

The Medical Society of Virginia	193
Public Health	195
Medico-Legal Notes	196
Notes on Pulmonary Tuberculosis	197
Mental Health	200
Woman's Auxiliary	202
President's Message	204
Editorial	205
Society Proceedings	207
News	207
Obituaries	209

INDEX TO ADVERTISERS—Page 4.

Entered as Second Class Matter at the Postoffice, Richmond, Va.

Upjohn

Rheumatoid arthritis, rheumatic fever, intractable asthma, allergies . . .

Cortef* *tablets*

Supplied:

5 mg. tablets in bottles of 50
10 mg. tablets in bottles of 25, 100, 500
20 mg. tablets in bottles of 25, 100, 500

*REGISTERED TRADEMARK FOR THE UPJOHN BRAND OF HYDROCORTISONE (COMPOUND F)

The Upjohn Company, Kalamazoo, Michigan



Every nurse quickly understands



Feeding Directions

Baker's Modified Milk (Liquid)

FIRST FIVE DAYS OF LIFE—1 part Boker's to 2 parts cool water, previously boiled.

SECOND FIVE DAYS—1 part Boker's to 1½ parts cool water, previously boiled.

AFTER TENTH DAY—1 part Boker's to 1 part cool water, previously boiled.

these simple feeding directions

More and more doctors are making Baker's Modified Milk their routine feeding in hospitals. With Baker's:

1. Feeding directions are simple—there's little chance of error.
2. Highest quality is assured. Grade A Milk*— First in infant feeding.
3. A more than adequate protein is provided for proper nourishment.
4. The fats are well-tolerated because of the complete replacement of butterfat with clinically-proven vegetable and animal fats.
5. All known essential vitamins are provided in the amounts customarily taken by infants through fortification with synthetic vitamins.

Baker's is supplied gratis to all hospitals, so you can readily leave instructions to have your babies put on Baker's.



BAKER'S MODIFIED MILK

*Made from grade A milk (U. S. Public Health Service Milk Code) which has been modified by replacement of the milk fat with vegetable and animal fats and by the addition of carbohydrates, vitamins and iron.

Baker's Modified Milk

THE BAKER LABORATORIES, INC.

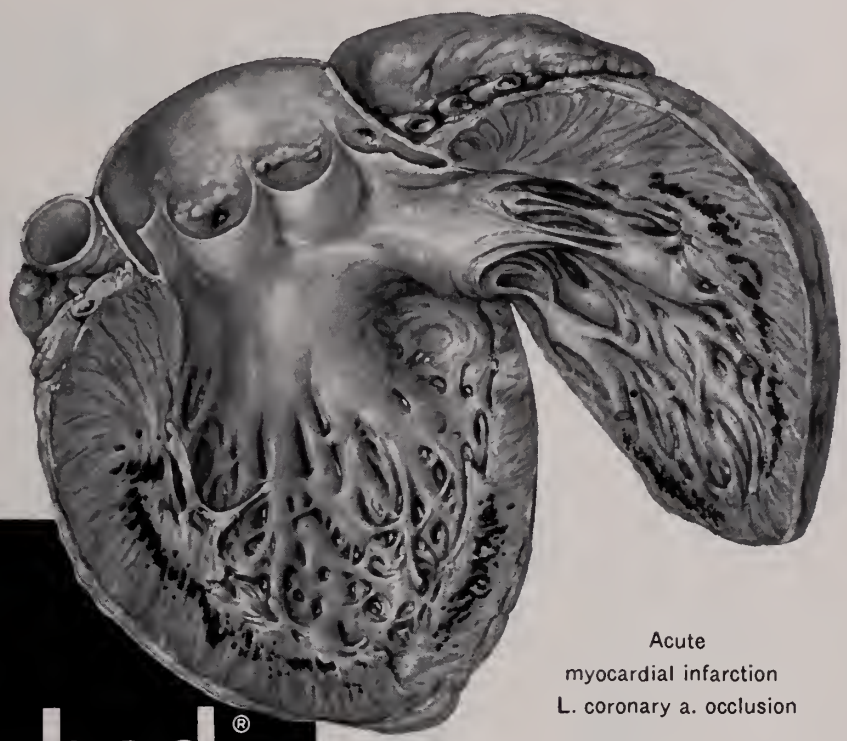
Milk Products Exclusively for the Medical Profession

MAIN OFFICE: CLEVELAND 3, OHIO **PLANT: EAST TROY, WISCONSIN**

—in the severe shock



secondary to myocardial infarction



Acute
myocardial infarction
L. coronary a. occlusion

WINTHROP

Levophed®

BITARTRATE

..... *may be life-saving*

A series of 14 cases of severe shock accompanying myocardial infarction was treated by various methods. All of the 6 patients who received Levophed recovered despite the presence of congestive heart failure.[1]

The practically instant pressor effect of Levophed—within 10 to 30 seconds—may usually be maintained at desired levels almost indefinitely.

Write for detailed literature.

Winthrop-Stearns INC.
NEW YORK 18, N. Y. • WINDSOR, ONT.

1. Gazes, P. C., Goldberg, L. I., and Darby, T. D.: *Circulation,* 8: 883, Dec., 1953.

Levophed bitartrate, brand of levarterenol bitartrate

on all 4 counts

ACH





wide spectrum of effectiveness
rapid diffusion
prompt control of infection
minimum side effects

the decision often favors

ROMYCIN*

HYDROCHLORIDE
TETRACYCLINE HCl *LEDERLE*

Compared with certain other antibiotics, ACHROMYCIN offers a broader spectrum of effectiveness, more rapid diffusion for quicker control of infection, and the distinct advantage of being well tolerated by the great majority of patients, young and old alike.

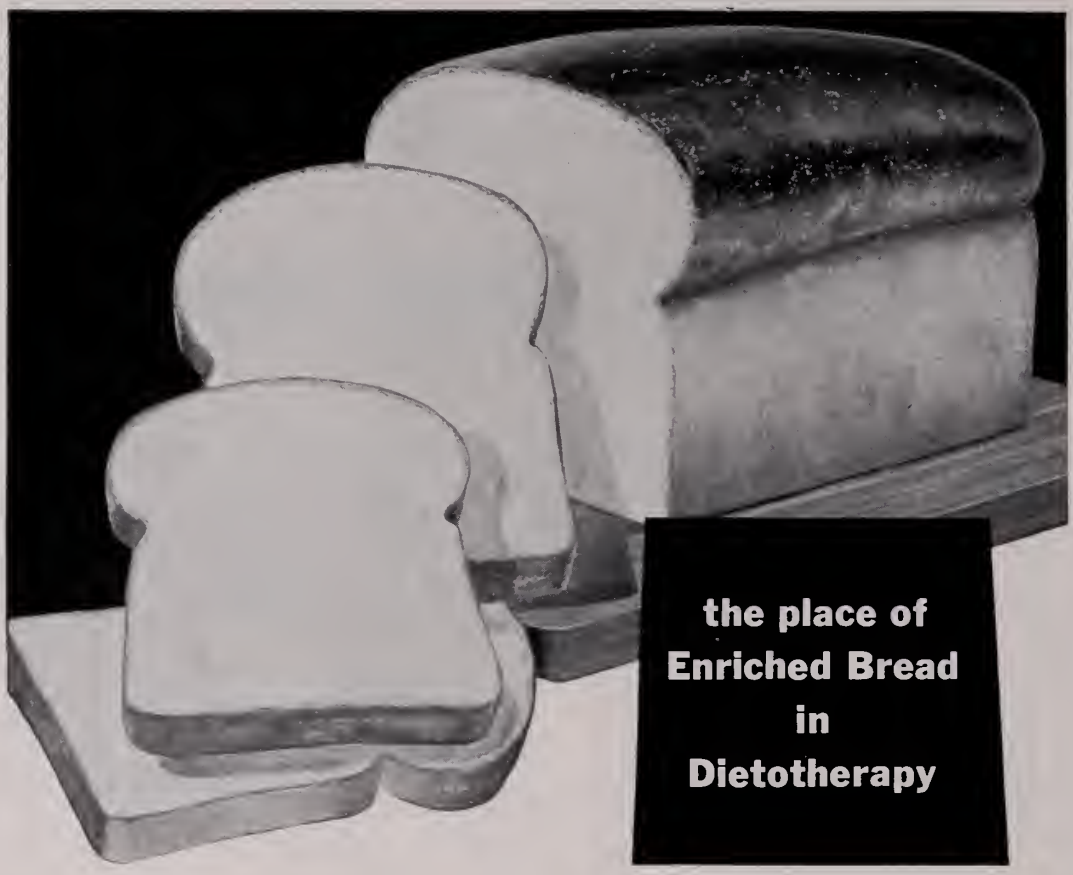
Within one year of the day it was offered to the medical profession, ACHROMYCIN had proved effective against a wide variety of infections caused by Gram-negative and Gram-positive bacteria rickettsiae, and certain viruses and protozoa.

With each passing week, acceptance of ACHROMYCIN is still growing. ACHROMYCIN, in its many forms, has won recognition as a most effective therapeutic agent.

Lederle

LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* Pearl River, New York

*REG. U. S. PAT. OFF.



In the many instances encountered in everyday practice when dietary adjustment assumes a therapeutic role, the special diet gains in nutritional value when the bread included is enriched bread.

Enriched bread, today the bulk of commercial bread, contains important amounts of added B vitamins, iron, and in most instances nonfat milk solids. Because it supplies significant quantities of essential nutrients that are metabolically required regardless of the condition under treatment, enriched bread deserves a place in virtually all special purpose diets, including those for weight reduction. In the latter, two or three slices of enriched bread, the quantity usually allowed, contribute needed calories as well as essential nutrients in noteworthy amounts.

In compliance with government regulations, enriched bread, per pound, provides at least 1.1 mg. of thiamine, 0.7 mg. of riboflavin, 10 mg. of niacin, and 8 mg. of iron. By and large, enriched bread as marketed also supplies about 400 mg. of calcium and 39 Gm. of protein. Since the protein consists of flour and milk proteins, it is biologically valuable for growth as well as tissue maintenance. Thus enriched bread can make a significant contribution to the satisfaction of daily requirements in dietotherapy.

Bread rounds out virtually every diet. Because it is readily digested and contains only an insignificant amount of indigestible residue, enriched bread is rarely—if ever—contraindicated.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

THE VIRGINIA BAKERS COUNCIL
In co-operation with
THE AMERICAN BAKERS ASSOCIATION

With "Premarin," relief
of menopausal distress is
prompt and the "sense of well-being"
imparted is highly gratifying
to the patient.

"Premarin"® —Conjugated Estrogens (equine)

5513

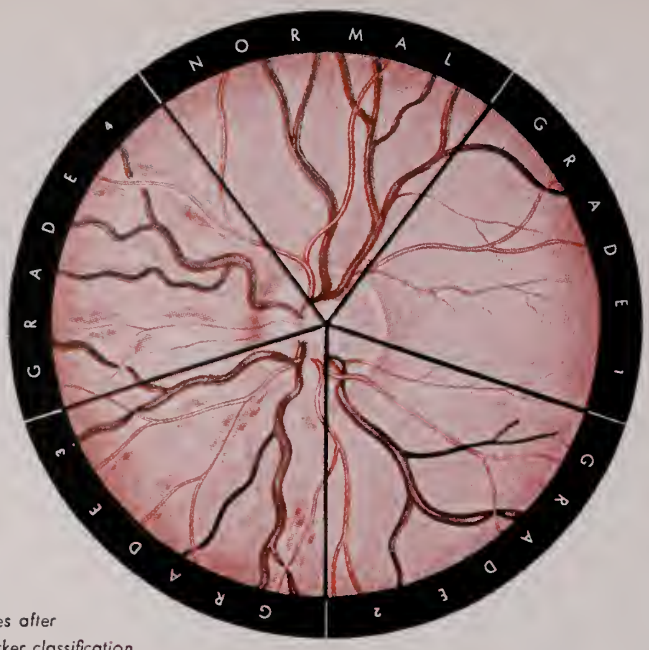
Relax the best way
... pause for Coke



Time out for
refreshment

DRINK
Coca-Cola
REG. U.S. PAT. OFF.





Eye ground changes after Keith-Wagener-Barker classification

In hypertension, effective reduction of blood pressure is assured in 90% of appropriate cases when dosage is fitted to the requirements of the individual patient. Response is reliable, uniform, prolonged. By-effects are minimal. Convenient t.i.d. oral tablet medication.

There is usually regression in retinal vascular changes, resorption of exudates, subsidence of papilledema, and improvement in vision.

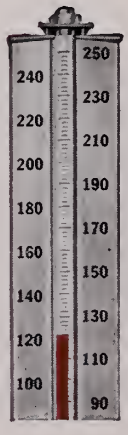
For a clinical supply of 20 mg. Ansolysen Tablets, sufficient to initiate therapy for two patients, write on your prescription blank to Wyeth Laboratories, Professional Service Department A-6.

Supplied in scored tablets of 20, 40, and 100 mg., bottles of 100. Also available: Injection, 10 mg. per cc., vials of 10 cc.

ANSOLYSEN®

TARTRATE (Pentolinium Tartrate)

ALWAYS LOWERS BLOOD PRESSURE



Wyeth®
Philadelphia 2, Pa.

The "DO's" of Low Sodium Diets

You know the "don'ts" of sodium restriction —the list is long. Here are some "do's" that will add zest to your patient's diet. And with new flavors to replace salt, he'll have a diet he can stick to.

Here's what can be used—

Spices and herbs, lemon and lime, variously flavored vinegars are all acceptable. And fresh-ground pepper has a pungency that never came out of a shaker!

Here's how—

Hamburger takes well to a pinch of thyme, another of marjoram, and a sprinkle of pepper. Chicken's delicious with a squeeze of lemon, a touch of rosemary, and sweet butter to baste. And broiled steak speaks for itself.

Vegetables are even easier. Your patient may like them livened with vinegar—white wine vinegar with mild flavored vegetables, red with more robust flavors. Broccoli and asparagus are especially good with lemon juice.

If butter is a "must," make it sweet butter with nutmeg or rosemary on string beans. Savory brings out the best in limas, while tarragon teams with carrots, basil with tomatoes. And onions boiled with whole clove and thyme would delight the taste of an epicure!

This is only the beginning, but it gives your patient something to start with. Before long he'll want to experiment for himself. And while he's learning new flavor tricks, your treatment has a chance to show its full effectiveness.



United States Brewers Foundation

Beer — America's Beverage of Moderation

7 mg. sodium/100 gm.

17 mg. sodium/8 oz. glass

(Average of American beers)

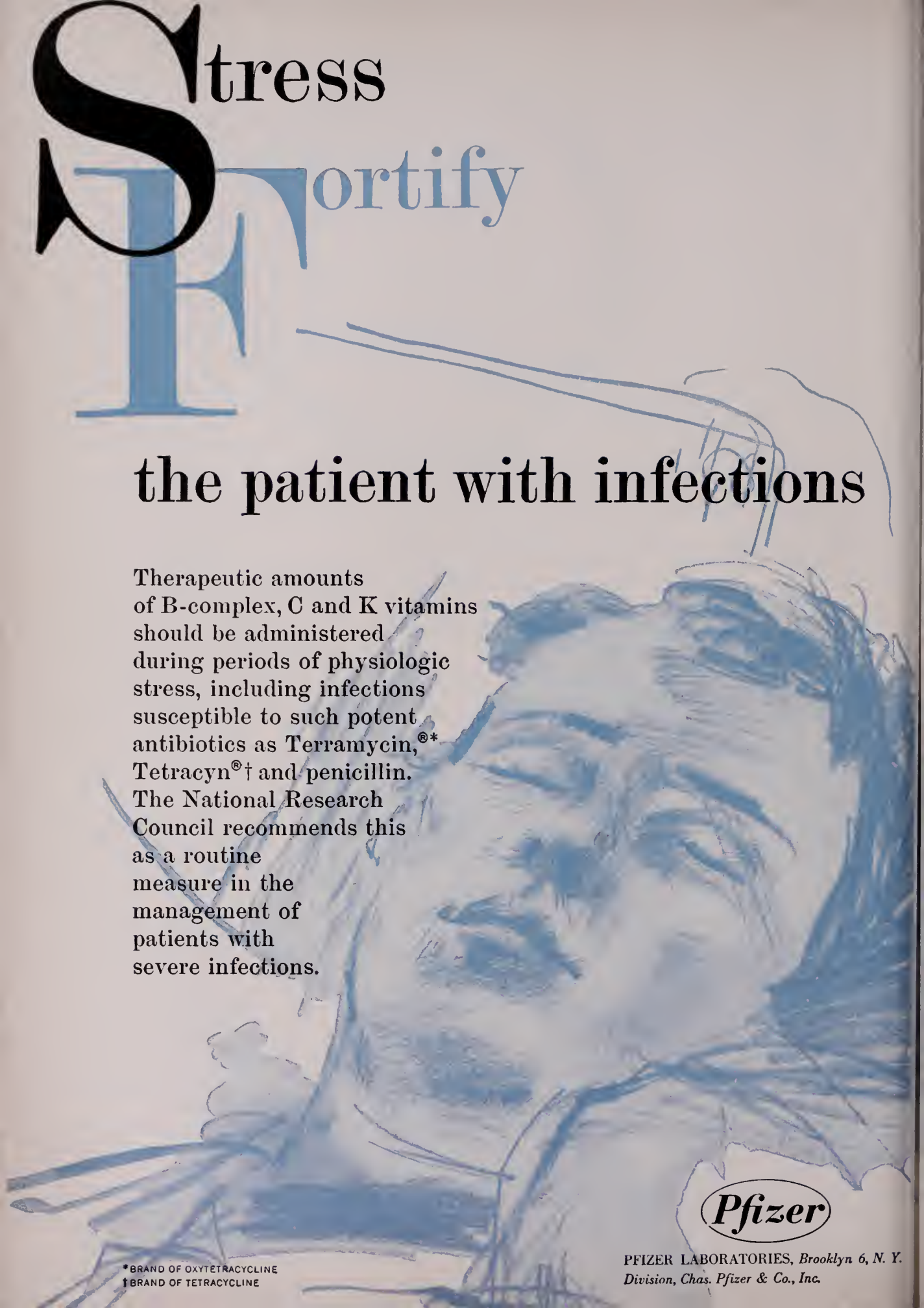
If you'd like reprints of 12 different diets, please write United States Brewers Foundation, 535 Fifth Ave., New York 17, N.Y.

Stress

Fortify

the patient with infections

Therapeutic amounts of B-complex, C and K vitamins should be administered during periods of physiologic stress, including infections susceptible to such potent antibiotics as Terramycin,®* Tetracyn®† and penicillin. The National Research Council recommends this as a routine measure in the management of patients with severe infections.



*BRAND OF OXYTETRACYCLINE
†BRAND OF TETRACYCLINE

Pfizer

PFIZER LABORATORIES, *Brooklyn 6, N. Y.*
Division, Chas. Pfizer & Co., Inc.

"an effective antirheumatic agent"*

nonhormonal anti-arthritic

BUTAZOLIDIN®

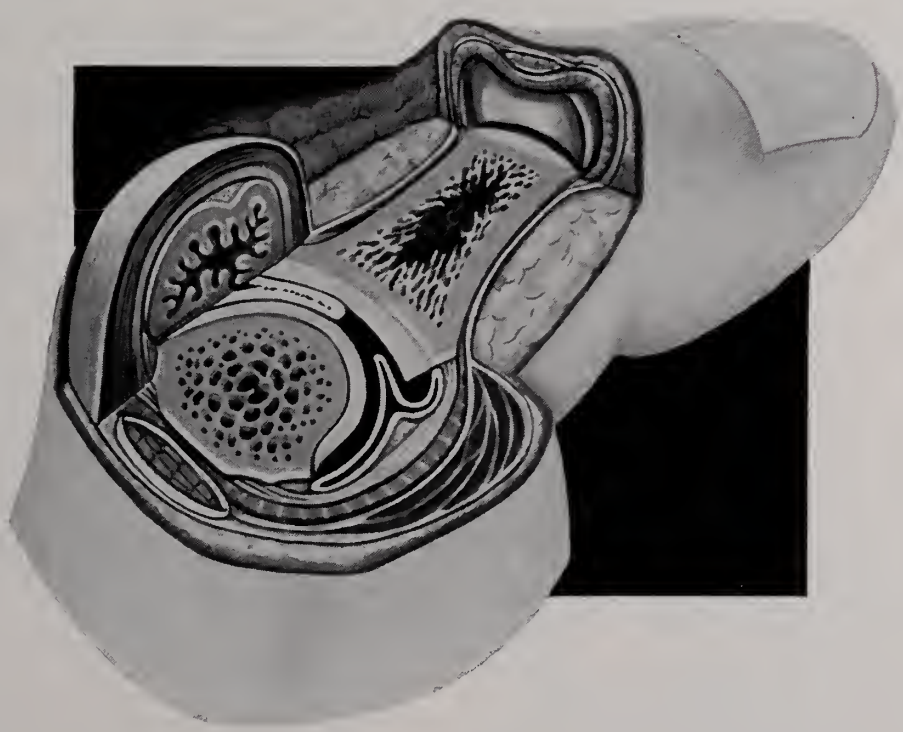
(brand of phenylbutazone)

relieves pain • improves function • resolves inflammation

The standing of BUTAZOLIDIN among today's anti-arthritics is attested by more than 250 published reports. From this combined experience it is evident that BUTAZOLIDIN has achieved recognition as a potent agent capable of producing clinical results that compare favorably with those of the hormones.

Indications: Gouty Arthritis Rheumatoid Arthritis Psoriatic Arthritis
Rheumatoid Spondylitis Painful Shoulder Syndrome
BUTAZOLIDIN® (brand of phenylbutazone) red coated tablets of 100 mg.

*Bunim, J. J.: Research Activities in Rheumatic Diseases. Pub. Health Rep. 69:437, 1954.



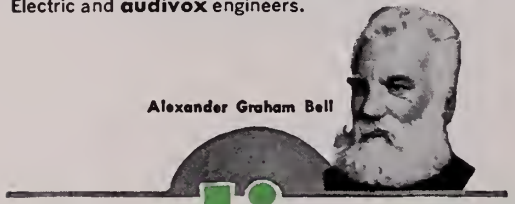
GEIGY PHARMACEUTICALS
Division of Geigy Chemical Corporation, 220 Church Street, New York 13, N.Y.
40555



pedigree

Only a flawless pedigree — a long and illustrious ancestry of purebreds — can produce a champion show dog.

Only **audivox** in the hearing-aid field can trace an ancestry that includes both Western Electric and Bell Telephone Laboratories. **audivox** lineage springs from the pioneer experiments of Dr. Alexander Graham Bell, furthered by the development of the hearing aid at Bell Telephone Laboratories, brought to fruition by Western Electric and **audivox** engineers.



Alexander Graham Bell

audivox

Successor to *Western Electric* Hearing Aid Division
123 Worcester St., Boston, Mass.



all-transistor
Model 72
by Audivox

new:

audivox presents a versatile new tool in the psychological and somatic management of hearing loss — the Model 72 "New World." Because it departs completely from conventional hearing-aid appearance, this tiny "prosthetic ear" may be worn as a barrette, tie clip, or clasp without concealment. Resultant benefits include new poise and new aural acuity for the wearer through free-field reception without clothing rustle.

MANY DOCTORS rely on career Audivox dealers for conscientious, prompt attention to their patients' hearing needs. There is an Audivox dealer — chosen for his interest, ability, and integrity — in your vicinity. He is listed in the Hearing Aid section of your classified telephone directory, under Audivox or Western Electric.

the pedigreed hearing aid.

The individualized formula is the foundation of the infant's health and future well being



Karo Syrup...a carbohydrate of choice in "milk modification" for 3 generations

Ideal practice dictates periodic adaptation of the individualized formula to the growing infant rather than the infant to the formula. With Karo, milk and water in the universal prescription, the doctor can readily quantitate the best formula for the infant. A successful infant formula thus lays the foundation for early introduction of semi-solid foods in widening the infant's spectrum of nutrients.

Karo is well tolerated, easily digested, gradually absorbed at spaced intervals and completely utilized. It is a balanced fluid mixture of maltose, dextrins and dextrose readily soluble in fluid whole or evaporated milk. *Precludes* fermentation and irritation. Produces no intestinal or hypoallergenic reactions. Bacteria-free Karo is safe for feeding prematures, newborns, and infants —well and sick.

Light and dark Karo are interchangeable in formulas; both yield 60 calories per tablespoon.



CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N.Y.

Behind each bottle three generations of world literature



for seborrheic dermatitis patients

SELSUN®

. . . brings quick, sure relief. Just two or three SELSUN applications relieve itching, burning scalps. Four or five more completely clear scaling. Then each SELSUN application keeps the scalp free of scales *for one to four weeks.* And SELSUN completely controls 81-87% of all seborrheic dermatitis cases, 92-95% of dandruff cases.

. . . with no daily care or ointments. Your patients will find SELSUN remarkably easy to use. It is applied and rinsed out while washing the hair. Takes only about five minutes – no ointments or overnight applications. Leaves hair and scalp clean. In 4-fluidounce bottles, prescription only. Abbott

®SELSUN *Sulfide Suspension/Selenium Sulfide, Abbott*

504093

HydroCortone®

(HYDROCORTISONE, MERCK)

In rheumatic fever early therapy may prevent residual cardiac damage[1]

MAJOR ADVANTAGES: Intense anti-inflammatory action. Prompt suppression of symptoms. Lifesaving therapy in some instances.



Most clinicians agree that HYDROCORTONE like cortisone produces prompt suppression of the extra cardiac manifestations of rheumatic fever. Agreement is also general that adequate hormonal therapy favorably influences pericarditis, prolonged PR interval and congestive failure (when sodium intake is restricted). While less unequivocal there is considerable evidence that adrenocortical therapy also suppresses tachycardia, gallop rhythm and overactivity.[2]

The main point in question remains the ability of HYDROCORTONE or CORTONE to prevent valvulitis. On this score, Kroop[1] in a recent study of 56 patients with rheumatic fever concludes "A two-year follow-up of patients who had sustained initial attacks of carditis indicates that early treatment with large doses may prevent residual cardiac damage." This conclusion is further supported by a recent review[3] which states ". . . many of the reported poor responses of rheumatic fever to treatment occurred in cases in which either very small doses of the hormones were used or treatment was continued for only a short period of time."

SUPPLIED: HYDROCORTONE Tablets: 20 mg., bottles of 25, 100 and 500 tablets; 10 mg., bottles of 50, 100 and 500 tablets; 5 mg. bottles of 50 tablets.

SHARP & DOHME

PHILADELPHIA 1, PA.
DIVISION OF MERCK & CO., INC.

REFERENCES: 1. Kroop, I. G., *N. Y. State J. Med.* **54**:2699, Oct. 1, 1954. 2. Heffer, E. T. *et al.*, *J. Pediatrics* **44**:630, June 1954. 3. Massell, B. F., *New England J. Med.* **251**:263, Aug. 12, 1954.

when hormones

are preferred therapy...

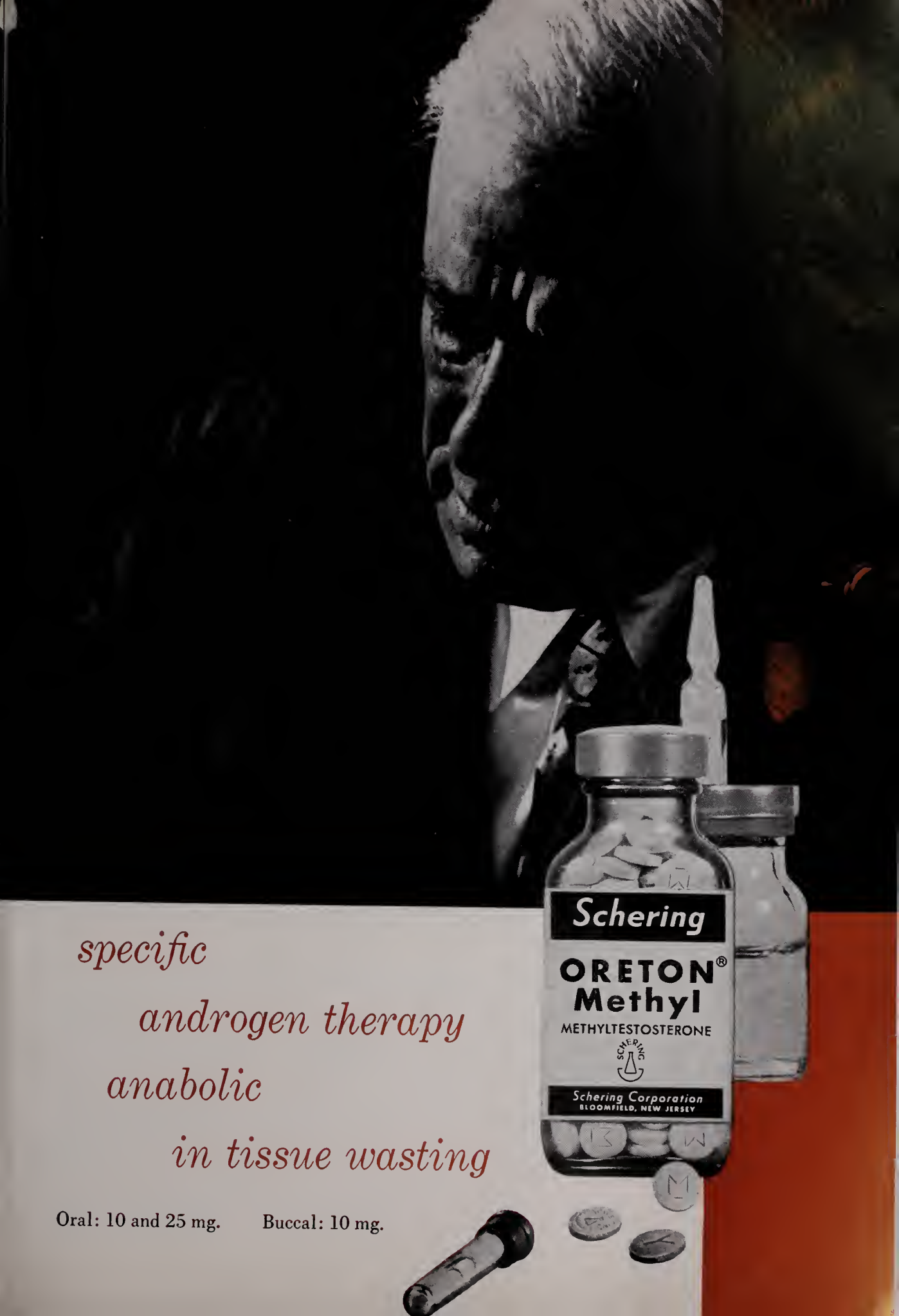
SCHERING HORMONES

assure superior quality

Schering's high standards and quality control assure products of unchanging potency and purity for uniform action and clinical efficacy.

minimal cost

Manufacturing know-how and continuing research by Schering provide preparations of highest quality at minimum cost.



specific

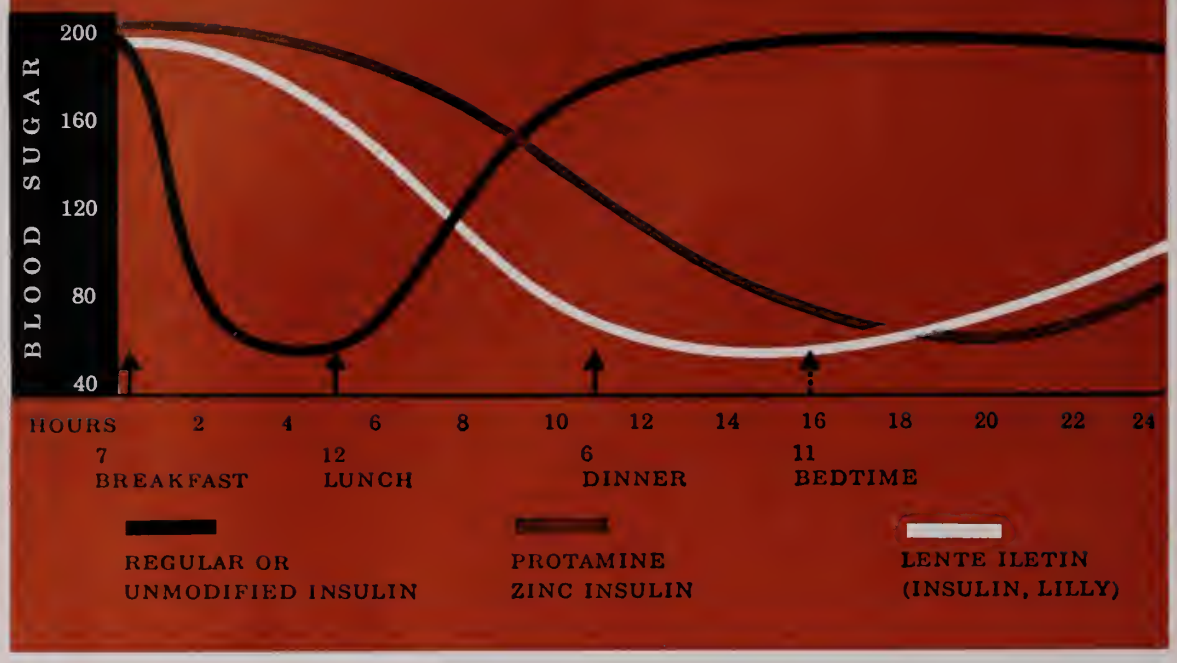
androgen therapy

anabolic

in tissue wasting

Oral: 10 and 25 mg. Buccal: 10 mg.

a preferred basic Insulin for all diabetics



Lente Iletin (Insulin, Lilly)

Another step toward the ideal Insulin

Simplified administration—Only one injection a day controls the majority of diabetic patients.

Simplified therapy—Approximately 85 percent of all diabetic patients can be treated with Lente Iletin (Insulin, Lilly) alone.

Simplified formula—Lente Iletin (Insulin, Lilly) is the only intermediate-acting Insulin free of foreign modifying proteins.

Simplified identification—The new distinctive "Hexanek" bottle makes identification easy.

Write for descriptive literature today.



Supplied in U-40 and U-80 strengths at all pharmacies.

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.

The Virginia
MEDICAL
MONTHLY

April, 1955
Vol. 82, No. 4
Whole No. 1234

The Physicians Responsibility in the Prevention of Automobile Accidents and Deaths

FLETCHER D. WOODWARD, M.D.,
CARY N. MOON, JR., M.D.,
Charlottesville, Va.

THE rapidly increasing number of accidents and deaths occasioned by the automobile in 1947 induced me (F.D.W.) to study the types of injuries most frequently encountered and to ascertain, when possible, the factors which caused them. From November through May, 1948, a period of seven months, approximately 450 patients were treated at the University of Virginia Hospital, Charlottesville, Va., for injuries occasioned by the automobile. Approximately one-third, or 145 patients, were able to give the sources of their injuries.

In 80% of those receiving injuries to the head, the injuries were due to impact of the head against the windshield or dashboard, or both. In 80% of the injuries to the hip and leg, the causative factor was impact against the dashboard. In 66% of those receiving chest injuries, they were due to impact against the steering wheel. The great majority of injuries were received by guest passengers. Although the entire group of patients studied was small, it did give an index of the type of causes of such injuries, and subsequent more extensive studies in various places have proven that these percentages and reasons therefor are essentially correct.

After studying these statistics, it seemed obvious that redesign of the automobile could prevent many accidents. So, with temerity, I decided to criticize the automotive engineers for their lack of consideration of the users of their machines, as against the so-called eye appeal of color, chromium and gadgets. I also listed many suggestions which, if employed by the engineers, would minimize this carnage so evident to the doctor who is called upon day and night to treat these victims and to pronounce death on those who are beyond medical help.

This criticism was given as a chairman's address before the section of Laryngology, Otology and Rhinology of the American Medical Association in Chicago in 1948 and was published in the Journal of the American Medical Association in October of that year. It has been subsequently reprinted in several other publications in this country, Canada, England and New Zealand. The hundreds of letters I have since received convinced me that many people, especially physicians, shared my views.

Since that time, the annual deaths have increased approximately 1,000 each year and the injuries by 200,000 each year. If this rate is continued, it has been estimated that by the year 1975, twenty years from now, there will be some 70,000 deaths per year. Although the motor vehicle accident rate has been decreasing despite heavy increase in traffic volume, the carnage is shocking.

As a result of the study of this problem, it is obvious that the physician has three responsibilities. First: Since the highest death and accident rate is in the young adult age group, he should urge and work for the introduction of compulsory courses in safe driving in all schools, public, parochial and

Presented as the Equen Lecture before the Fulton County Medical Society in Atlanta, Georgia, November 11, 1954, by F.D.W.

From the Department of Otolaryngology, University of Virginia Hospital, Charlottesville, Virginia.

private, for it has already been shown that the accident rate of those who received such training was substantially lower than those without it.

The large insurance companies have also recognized the importance of such courses. A certificate certifying that one has satisfactorily completed such a course should be required before the first driving permit is issued.

Second: Since a study of the type of injuries encountered by him indicates that many of them could have been prevented by alterations in design of the automobile itself, he should endeavor to have established certain basic safety measures which should be incorporated in all cars and required of all manufacturers. Among these measures which should be required are:

(1) Control of speed by the development of a governor limiting the top speed to 55 miles per hour but in no way interfering with acceleration at lower speeds. The manufacturers oppose this because they stated that reserve speed is necessary in passing other cars. But if everyone knew his top speed was 55 miles per hour, he would be governed accordingly and I feel sure many serious accidents and deaths would be avoided.

(2) Since the majority of head injuries are due to impact against the windshield or dashboard, the windshield should be ejectable on impact, and the dashboard should be padded. Of course, all projecting knobs and buttons should be eliminated.

(3) The front bumpers should be mounted on "oleo shock absorbers" in a manner similar to the landing gear in airplanes. One would not expect them to absorb all the shock of a collision, but the absorption of even a small percentage would give added safety to the passengers.

(4) Since the majority of injuries suffered by the driver are chest injuries, a hydraulic steering column which will move forward under a force of approximately 100 foot pounds should be provided.

(5) The backs of both front and rear seats should be rigidly locked in position; then, if waist and shoulder belts are worn by all passengers, the car itself would act as protective armor in collision and they could withstand a crash of 40G or more as has been done in airplanes. The only alternative to the use of belts is to have all guest seats face the rear of the car.

(6) A flashing red light or auditory signal should be provided to indicate when a speed of 55 miles per hour has been reached, if a governor has not been installed.

(7) The use of a polarized windshield would minimize glare in daytime driving and when coupled with oppositely polarized lenses on headlights, would minimize night blinding. The present day tinted windshields are dangerous when driving at night and particularly so if dark glasses are worn at the same time.

The physicians third responsibility concerns purely medical aspects of the problem which the engineers have referred to as the "Beam in my own eye". The rising incidence of automotive injuries and deaths necessitates a review of diseases, physical conditions and drugs which should be considered by the physician and licensing bureaus before driving permits are issued or renewed. In view of this need, the following lists have been compiled for consideration and study. The final selection of these items should rest with the American Medical Association and other national special societies directly concerned and, when complete, should be furnished to the motor vehicle licensing bureaus and health departments for all states. This study by the American Medical Association is most urgent.

The following lists and discussion are offered with sincere apologies to the many fine drivers whose conditions are included but whose safety records are excellent. It is obvious that only a small per cent of accidents result from drugs, driver illness or physical disability. However, this fact in no way relieves the physician of the responsibility of doing all within his power to prevent them. For even 2 to 3% of 2,000,000 injuries is a sizable number.

The physician is directly responsible in the prescription of drugs which might precipitate an automobile accident. When necessary, the patient should be warned of likely and unlikely drug reactions which might hamper driving skill; and with some drugs the patient should be ordered not to drive until stability is reached. The physician is directly responsible in advising patients of the dangers of driving in the presence of certain symptoms prior to diagnosis, and then, later, should either warn his patient or forbid him to drive if his driving ability is likely to be hampered. Many of these diseases are borderline and have to be individualized, but in many others there is a definite contraindication to operating a motor vehicle. The physician may be required to report disabled drivers to a safety committee or clinic or licensing bureau for re-evaluation.

The automobile accident problem was studied last year by many groups, among which were the White House Conference and the Second Conference on

Health, Medical and drug factors in highway safety by the Committee on Highway Safety Research of the National Research Council of the National Academy of Sciences. This meeting was attended by representatives of 15 scientific and 3 traffic specialties and did much to advance the thinking on this problem.

Group I. Nervous System:

1. Narcolepsy
2. Petit mal
3. Grand mal
4. Subarachnoid hemorrhage
5. Cerebral vascular accident
6. Intracranial disease
7. Increased intracranial pressure
8. Mental deficiencies
9. Senility
10. Psychoses
11. Post lobotomy
12. Parkinsonism
13. Neuropathies
14. Neuromuscular disorders
15. Paraplegia
16. Hemiplegia

Discussion: Dr. Lawrence Selling, of Florida, who had many years of experience while in Detroit working in the psychopathic clinic of the Recorder's Court has written extensively on the factors represented in the above group, and concluded that physical, mental and eye disorders are most important and that in general, traffic law violators commit their offenses because of: (1) faulty driving habits, (2) ignorance of traffic laws, (3) poor physical condition, (4) inferior intelligence, (5) mental disease, (6) psychopathic personality, (7) bad driving attitudes and (8) alcoholism.

Since the major serious violators are egocentric, inadequate individuals of low intelligence, how much of a factor are these traits in the 46.5% deaths due to speeding and the 19% deaths from driving on the wrong side of the road? The flight reaction exhibited by the hit-run driver is an example of a psychopathic personality. Many abnormal people are driving and, since sufficient evidence has accumulated to decide who may and who may not drive, the time has now come for such decisions to be made.

If health departments would set up clinics to work with traffic courts, similar to the Psychopathic Clinic of the Recorder's Court of Detroit, it would eliminate many unfit drivers and prevent many secondary offences. This clinic should be staffed by physicians with broad and specialized training to handle all phases of determining a driver's fitness. Cases should be referred to this clinic by the courts or motor vehicle licensing bureaus. In addition to the cases referred by the court, it could also pass on the fitness of all commercial drivers and those over 65 years of age. It may eventually be possible for such a clinic to examine all prospective drivers before a permit is granted. This clinic would necessarily work in close cooperation with the family doctor.

Patients with neuromuscular diseases, paraplegia or hemiplegia may be permitted to drive after rehabilitation if a driving course has been completed satisfactorily and the clinic and family doctor have agreed. Specially designed automobiles may be necessary.

The law regarding the operation of automobiles by those suffering from narcolepsy, petit mal or grand mal varies widely in the various states. In some it is a reportable disease and a permit is not granted. In other states it has been found that the controlled epileptic makes a safe driver. It is obvious that epilepsy is a problem for the clinic and the family doctor to evaluate. Permission to drive may be given after examination, re-examination, and the response to anti-convulsive therapy has been determined.

Group II. Special Senses:

1. Meniere's syndrome and other vestibular disturbances
2. Deficient hearing
3. Visual and ocular muscular defects.

Discussion: It is conceded that people subject to sudden explosive attacks of vertigo should not drive. Likewise, bilateral deafness below the 30 decibel level unless the defect is correctible by a hearing aid which must be worn. Visual and various other ocular disturbances below the commonly accepted standards may call for ophthalmological consultation in order to reach a decision.

Group III. Cardiovascular:

1. Essential hypertension, grade IV
2. Carotid sinus hypersensitivity
3. Visual and ocular muscular defects.
4. Post-coronary thrombosis period
5. Aortic stenosis
6. Severe angina pectoris.

Discussion: The first attack of heart disease which tends to death or unconsciousness is unpredictable, unfortunately. But if the physician explains the symptoms of impending danger to those who have survived the initial attack or those who present evidence of other cardiovascular disease, they will

be cooperative. They want to live, too. If they are alert to the effects of sedative drugs, nitroglycerine and the early symptoms of impending disaster, they will be able to drive off the road and turn off the ignition, as a rule.

Group IV. Miscellaneous:

1. Hyperinsulinism, exogenous and endogenous
2. Acute febrile illnesses
3. Postoperative periods
4. Narcotic addiction
5. Alcoholism.

Discussion: Diabetes occurs in from 0.5 to 1.1% of the population and those taking insulin create a particular problem of being vulnerable to insulin shock reactions. No commercial drivers taking insulin should be permitted to drive, but, if private drivers understood their difficulty and responsibility, they may be allowed to drive under the supervision and discretion of their private physician.

Alcoholism. The drinking driver was responsible for 18% of our fatal accidents last year and many thousands of injuries, for alcohol is not a stimulant but a depressant narcotic. Fortunately, certain amounts produce certain blood levels and the degree of intoxication can be determined by chemical means. Either blood or respired air determinations indicate the blood level: (1) From a trace to 0.05% alcohol in the blood is safe. (2) From 0.05% to 0.15% is questionable. (3) Above 0.15%, the driver is intoxicated. Accidents with blood levels of 0.10% to 0.15% are 2½ times as frequent as in normal individuals and accidents with blood levels above 0.15% are 10 times as frequent.

One bottle of beer	= 1 oz. whisky
2 oz. whisky	= 0.05% alcohol in blood
4 oz. whisky	= 0.10% alcohol in blood
6 oz. whisky	= 0.15% alcohol in blood
9 oz. whisky (½ pt.)	= 0.20% alcohol in blood.

The 0.15% is the critical point and all drivers suspected of intoxication should have a breath test, for many other conditions simulate alcohol intoxication. It has been found that 9 out of 10 drivers submit voluntarily to the test and, of this group, 20% were acquitted. The test should be made mandatory by law and the blood level determination accepted as evidence of intoxication or not, for not only would the drunken driver be punished, but the danger of holding a driver with some serious medical disorder such as a cerebral vascular thrombosis or hemorrhage would be avoided.

Group V. Physical Conditions:

1. Amputations
2. Paralyses
3. Advancing age—All over 65 years of age should have annual re-evaluations
4. Arthritic deformities
5. Certain plaster cast applications.

Discussion: Patients with amputations and paralyses may be permitted to drive after rehabilitation or by utilizing specially designed automobiles if a driving course has been satisfactorily completed and the clinic and family doctor have agreed.

Group VI. Drug:

1. Alcohol
2. Carbon monoxide
3. Sedatives
4. Narcotics
5. Anticonvulsive drugs
6. Vasodilating drugs.

Discussion: Since the degree of carboxy hemoglobin is determined by the smoking of cigarettes, altitude and possibly defective exhaust systems, anoxia and drowsiness may be a factor in certain accidents especially when the driver is fatigued and negotiates a high mountain in a defective automobile.

The physician should explain to his patients the expected effect from all drugs prescribed and also the possible side reactions and unpredictable reactions which at times may render the patient incapable of safe driving.

Conclusions

(1) It is obvious that much research is necessary before many of the above problems can be solved.

(2) The American Medical Association should emulate the British Medical Association and set up a special committee to investigate medical standards for automobile and truck drivers. This committee should work in close association with other national special societies directly concerned. The results of this study should be published and printed in pamphlet form for distribution to all state automobile licensing bureaus and state health departments. Such a study by the A.M.A. is urgent.

(3) Since the physician is responsible for such important decisions, he should at least have an authorative source of information to guide him.

(4) Perhaps, after all, Will Rogers' solution was the simplest and best—to allow no car on our streets and highways until it had been paid for.

The Medical Management of Hyperthyroidism

ERNEST H. YOUNT, M.D.,
Winston-Salem, North Carolina

TWELVE years have elapsed since antithyroid drugs (thiouracil) and radioactive iodine were added to our armanentarium in the management of hyperthyroidism.[1,2] Despite the vast experience accumulated during this period of time, there is still no consensus regarding the treatment of choice for diffuse toxic goiter. The fact that surgery, radioactive iodine, and antithyroid medication each have strong advocates emphasizes the curability of this disease.

The purpose of this paper is to discuss the medical management of hyperthyroidism by means of the antithyroid drugs or radio-iodine. Iodine solution decreases the activity of the thyroid temporarily, and hence is antithyroid medication; however, the term is used here to apply only to the thiouracil derivatives and the imidazole compounds.

Antithyroid Drugs

Indications. While it is generally agreed that subtotal thyroidectomy represents the ultimate method of choice in controlling thyroid hyperactivity associated with toxic multinodular or uninodular goiter, and with substernal or intrathoracic goiter, one can define certain hyperthyroid conditions in which drug therapy is indicated. Hyperthyroid patients being prepared for surgery, children and adolescents with Graves' disease, pregnant women with hyperthyroidism, cardiac patients with associated thyrotoxicosis, and patients in whom the diagnosis is subject to question are good candidates for medical management with antithyroid preparations.

The goal of preoperative antithyroid therapy is complete control of the disease prior to surgery. Partial control, which could be achieved by the use of iodine alone, gives results which are satisfactory, but not comparable to those obtained with thiouracil derivatives and imidazole compounds. Surgery should not be attempted until all symptoms have disappeared and the patient shows a gain in weight, a pulse rate below 90 per minute, and a basal metabolic rate of plus 15 or below. The exceptions to this rule are in the extremely small group of individuals whose BMR remains unchanged despite a loss of all manifestations of toxicity.

From the Department of Medicine, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

Read before the 59th Annual Meeting of the Seaboard Medical Association, November 16, 1954.
Received for publication, December 15, 1954.

In the very young person with thyrotoxicosis, the prolonged use of antithyroid medication offers approximately a 50 per cent chance of complete recovery and is associated with few complications. Many clinics feel that surgery during childhood and adolescence should be reserved for those patients who have failed to remain in remission after two adequate courses of antithyroid medication. Because of the threat of carcinogenesis, radio-iodine is seldom recommended for these young patients.

Antithyroid medication is the treatment of choice for hyperthyroidism occurring during pregnancy. Surgery should be avoided after the second trimester, and radio-iodine should never be employed later than the tenth week, since the fetal thyroid begins to function shortly thereafter and is capable of concentrating the radio-active material. The metabolism should not be reduced below that which is usual during pregnancy—a value generally considered to be 25 per cent above the normal range. In addition, the transmission of antithyroid compounds in therapeutically active amounts in the mother's milk contraindicates breast feeding following delivery.

It would seem that thyrotoxic patients with congestive heart failure should prove ideal candidates for radio-active iodine. However, because of the prolonged delay before the effect of treatment with radio-iodine becomes manifest, and the exacerbation of the disease in the period immediately following therapy, we feel that antithyroid preparations are the treatment of choice in this condition. The response to treatment begins almost immediately, and this method of therapy is not associated with the dangers inherent in surgery or with the risk of causing irreversible cardiac damage by a delay in therapeutic response. After the thyrotoxicosis and heart failure have been controlled, either surgery or radio-active iodine may be employed if prolonged medical management is unacceptable.

Infrequently the physician is confronted with borderline cases in which a definite diagnosis of hyperthyroidism cannot be made clinically. Such cases, of course, are much less frequent now that we have available objective tests such as determinations of the serum protein-bound iodine and of the glands uptake of radio-active iodine. If these tests are not available, however, one is occasionally unable to

distinguish organic heart disease from hyperthyroidism with associated cardiac symptoms. In other instances, anxiety and hypertension provide a difficult problem in differential diagnosis. Under conditions such as these, the use of antithyroid drugs serves as an excellent theraupeutic test, and suppresses thyroid activity without destroying the gland, until a definite decision can be reached.

Available Compounds. Both the thiouracil derivative and the imidazole compounds work by suppressing the oxidative enzyme systems through which inorganic iodide is bound to protein to form thyroid hormone. There is no concomitant depression of thyrotropin; hence, hyperplasia of the gland continues. Prior to surgery, the additional use of iodine in the form of Lugol's solution is necessary to suppress and inactivate thyrotropin so that the gland will have a more normal histologic appearance and bleeding during the operation will be diminished.

Many compounds have been tried, and at the present time our clinic favors the use of 1-Methyl-2-mercaptoimidazole (Tapazole) and 6-N-Propyl-2-thiouracil (Propylthiouracil).

Thiouracil was the first antithyroid compound introduced, and it is credited with being the most dependable in that there is less fluctuation of the disease to an established maintenance dose. Because of toxic manifestations, which occur in 10 to 15 per cent of the patients receiving this drug, its use has been virtually abandoned. 5-Iodo-2-thiouracil (Intrumil) has some advocates and its dependability in maintaining an unvarying response on a given dosage is greater than that of Tapazole and about the same as that of Propylthiouracil. Toxic manifestations have been encountered in only about 3 to 5 per cent of the patients receiving Itrumil; however, in a small group of hyperthyroid patients, rather large doses of the medication have failed to control symptoms. For this reason the drug has lost favor.

Tapazole is the most potent of the antithyroid drugs on a weight basis, and is the most rapidly acting of the compounds. Many patients experience relief of symptoms and an improved sense of well being within 48 to 72 hours after the beginning of the treatment. Toxic reactions have been minor and the incidence of such manifestations is estimated to be about 2 per cent as compared to approximately 4 per cent with Propylthiouracil. A slight disadvantage associated with the use of Tapazole has been the difficulty of maintaining a stable metabolic rate on a set dosage.

The toxic manifestations most frequently encountered with the antithyroid drugs have been drug rash, urticaria, fever, and agranulocytosis. Hepatitis has been reported following the use of imidazole compounds[3]. The most feared complication is the development of agranulocytosis. Routine leukocyte counts, once the initial period of therapy has passed, have proved unsatisfactory for the early detection of toxic reactions to the drug, since the development of agranulocytosis is rapid. Our policy has been to request a white cell count and differential smear on any patients receiving these drugs who complain of a sore throat, fever, or rash.

Antithyroid compounds should be discontinued if the white cell count falls below 3000 cells per cubic millimeter or if the percentage of polymorphonuclear cells is less than 30. If agranulocytosis does develop, we do not favor the substitution of another antithyroid drug but prefer to treat the agranulocytosis by the use of antibiotics and bed rest, and to use radioactive iodine for control of the thyrotoxicosis. It is conceivable that the irradiation effect might depress the bone marrow, but this has not happened in our experience.

A problem commonly encountered with the use of antithyroid drugs has been the failure to achieve complete control of the disease because of inadequate therapy. The initial dose of Tapazole should be 30 milligrams daily, and if no improvement is observed within ten days, the dosage should be increased. If Propylthiouracil is used, a daily dose of 300 milligrams should be given initially, and increased after the same period of time if no response is noted. The dosage required to effect a response is continued until a euthyroid condition has been established, and is then reduced slightly at monthly intervals as long as there is no return of toxic manifestations. Therapy should be continued for six to eighteen months.

The general experience has been that 25 to 50 per cent of the patients treated with antithyroid drugs will have a relapse within a short period of time after the medication has been withdrawn. Of those remaining in remission, approximately 25 per cent may be expected to have a return of symptoms within three to forty-eight months[4]. Repeated courses of therapy yield lower remission rates, but increases the total number of cases successfully managed by medical means.

Radio-Active Iodine

Radio-active iodine was first produced in 1934, and was used in the treatment of hyperthyroidism approximately ten years later[5,2]. The structure of radio-active substances is such that the nuclei of the

atoms, in contrast to those of naturally occurring elements, are unstable. As the atoms undergo decay and transmutation, the nuclei emit radiation of the type which have long been recognized to arise from radium and its degradation products. The isotope of iodine emits both beta and gamma rays. The beta emissions are entirely absorbed within a distance of 2 millimeters in tissue; and since the thyroid has a specific avidity for iodine, the high concentration of the isotope within the gland produces an intense local radiation effect. The gamma irradiation penetrates farther through tissue and much escapes the body, so that little biologic effect is produced.

Irradiation of the thyroid for therapeutic purposes is not new, and was introduced as early as 1900. In 1932, a survey of 10,000 cases of thyrotoxicosis treated with roentgen irradiation indicated that about 65 per cent were cured, 20 per cent had improved, and 15 per cent were treatment failures[6]. Although roentgen and radio-active iodine therapy work in the same manner by destroying hyperplastic tissue through beta irradiation, the latter is a far more satisfactory method of radiation.

The I_{131} is rapidly collected within the gland, and more specifically within the lumen of the follicles. This intense concentration of beta irradiation is sufficient to destroy hyperplastic thyroid tissue, but does not travel far enough to injure other structures of the neck, as do roentgen rays. In view of the superiority of radio-active iodine over roentgen therapy, which itself had fair success, it is not surprising that radio-iodine has become well established as an effective means of treating toxic diffuse goiter. Reports from various clinics, including ours, indicate a remission rate of approximately 90 per cent and there has been no instance of recurrent thyrotoxicosis in any patient in whom a euthyroid state has been produced[7].

Like antithyroid drugs and surgery, radio-active iodine is considered the treatment of choice for diffuse toxic goiter in many clinics. The possibility of genetic injury and carcinogenic effect, while purely hypothetical, has been sufficient to cause many physicians to limit its use to patients over the age of 40.

Treatment is simple and does not require hospitalization, except to carry out preliminary diagnostic studies. The radio-active iodine, tasteless when diluted in water, is given to the patient to drink. Observation for 24 to 48 hours is usually advisable because of the accentuation of thyrotoxicosis sometimes associated with intense destruction of the gland. Subjective improvement is often noted within two weeks, and within one month objective evidence of improvement may be apparent. Within two months, in the majority of cases, the pulse rate, the basal metabolic rate, and the weight curve indicate that the patient is in remission. In most instances the gland will have become quite small or disappeared entirely. If a remission does not occur within two months, consideration may be given to a repetition of the therapeutic dose of iodine-131.

The major complication to date has been the development of myxedema in about 10 per cent of the cases reported. One patient treated by us went from a state of severe hyperthyroidism to full blown myxedema within three months. No cases of radiation sickness, bone marrow depression, parathyroid damage, or renal injury have been reported. Sterility has not been observed. As were previously noted, this method of therapy should not be used in pregnant patients, since the fetal thyroid will pick up the radio-active material. There have been a few cases reported, however, in which pregnant patients were so treated unintentionally without damage to the fetus[8].

Summary

The use of antithyroid compounds and radio-active iodine in the treatment of diffuse toxic goiter has been discussed. One may select surgery, radio-iodine, or antithyroid medication for the treatment of such cases, and anticipate excellent results. No consensus exists as to the treatment of choice, and each case should be individualized to achieve the aim of producing a euthyroid state.

Bibliography

1. Hamilton, J. G., and Lawrence, J. H.: Recent Clinical Developments in the Therapeutic Application of Radio-Phosphorus and Radio-Iodine. J. Clin. Invest., 21:624, 1942.
2. Astwood, E. B.: Treatment of Hyperthyroidism with Thiourea and Thiouracil. J.A.M.A., 122:78, 1943.
3. Rosenbaum, H., and Reveno, W. S.: Agranulocytosis and Toxic Hepatitis from Methimazole. J.A.M.A. 152:27, 1953.
4. Soloman, D. H.; Beck, J. C.; Vanderloan, W. P., and Astwood, E. B.: Prognosis of Hyperthyroidism Treated by Antithyroid Drugs. J.A.M.A., 152:201-205, 1953.
5. Fermi, E.: Radio-Activity Induced by Neutron Bombardment. Nature, 133:757, 1943.
6. Menville, L. J.: Radiologic Aspect of Thyrotoxicosis. Radiology, 18:568-575, 1932.
7. Yount, E. H.; Andrews, J. R., and Jester, A. W.: The Use of Radio-Active Iodine in the Diagnosis and Treatment of Thyroid Disease. N. C. Med. J., 13:466-470, 1952.
8. Werner, S. C.; Quimby, E. H., and Schmidt, C.: Clinical Use of Radio-Active Iodine. Bull. New York Acad. Med., 24:549-560, 1948.

Phenylbutazone (Butazolidin) in the Treatment of Various Rheumatic Disorders

PAUL H. WORNOM, M.D.
Hampton, Virginia
OSCAR SWINEFORD, JR., M.D.
Charlottesville, Virginia

PHENYLBUTAZONE (Butazolidin®) was introduced into this country a few years ago for treatment of various types of rheumatic disorders. The drug was first used and evaluated in Switzerland and Germany. The review of the European literature by Kuzell and associates[1] revealed promising results. Since then, many reports[2,3,4,5,6] have appeared on its use in this country, most of them favorable. The drug has now been accepted by the Council on Pharmacy and Chemistry of the American Medical Association.[7] The observations reported herein confirm the experiences of others with phenylbutazone and should encourage its judicious use as an adjunct to the treatment of certain rhemuatic disorders.

Methods

Selection of Patients—Forty-nine patients were treated with phenylbutazone during a sixteen-month period. Thirty-two had rheumatoid arthritis, one had rheumatoid spondylitis, nine had mixed rheumatoid and osteoarthritis, and seven had miscellaneous forms of rheumatism. All of the patients had had unsatisfactory responses to one or more of the fellowing types of therapy: Analgesics, physical therapy, rest, fever therapy, vaccines, gold, cortisone, ACTH and X-ray. They were given phenylbutazone because previous treatment had been grossly unsatisfactory. Phenylbutazone was used in conjunction with other simple measures which seemed proper for each individual patient.

Phenylbutazone was not used if the patient could, by simpler regimes, maintain normal blood counts, temperature, erythrocyte sedimentation rates, sleep, appetite, weight, range of motion of all joints, and meet his economic, social and domestic demands.

Detailed medical history and physical examination, hemoglobin, hematocrit, red and white blood cell and platelet counts and routine urine examinations were obtained on all patients prior to the administration of phenylbutazone. All patients were required to obtain white blood counts, hemoglobin and hematocrit determinations weekly for the first six weeks. When no significant signs of toxicity developed in six weeks, the blood examinations were done every two weeks. They were given emphatic instructions to notify their physicians at the first sign of any untoward reaction such as fever, rash, sore throat, nausea, bleeding, diarrhea, or edema. Patients and physicians were urged to stop the drug whenever symptoms, signs, or changes in the blood suggested toxic reactions. All patients were seen within one to three weeks after starting the drug and at varying intervals thereafter.

Age and Duration of Symptoms—The ages of the patients varied from 20 to 78; the average was about 50. There were 28 females and 21 males. The duration of symptoms in the rheumatoid and mixed arthritis groups varied from 2 months to 20 years, the average being 7.6 years (see Tables I and II). The diagnoses and duration of symptoms in the miscellaneous group are shown in Table III.

Dosage—Phenylbutazone was given orally in tablet form. The patients were begun on 200 mg. three times a day with meals. A bedtime dose to be taken with food was added if no subjective improvement on the initial dose was noted in three or four days. When improvement was noted, the dose was reduced gradually to the level which sustained optimum relief. The average minimal maintenance dose varied between 200 mg. and 100 mg. daily. No patient received early doses of more than 800 mg. daily. None required over 300 mg. daily to maintain their maximum relief. Several patients took the drug intermittently with return of symptoms in a few days after the drug was stopped, but obtained relief on re-administration.

Results

Rheumatoid Arthritis—(See Table I). The thirty-two patients with rheumatoid arthritis were not classified into the stages defined by the Arthritis and Rheumatism Foundation in its Manual for Arthritis

PAUL H. WORNOM, M.D., *Trainee, National Institute of Arthritis and Metabolic Disease, 1952-1953.*

OSCAR SWINEFORD, JR., M.D., *From the Allergy-Arthritis Division, Department of Internal Medicine, University of Virginia School of Medicine.*

Clinics.[8] They were, however, classified on the basis of functional improvement, both before and after treatment, by the criteria set forth in that Manual. Subjective improvement for all patients was graded according to an arbitrary classification; 4+ represented complete relief of symptoms, 3+ marked relief, 2+ moderate relief, 1+ slight relief, and 0-no relief.

Subjectively, sixteen (50%) of the thirty-two patients with peripheral rheumatoid arthritis experienced grade 3-4+ improvement; fifteen patients (47%) had grade 1-2+ improvement, and one patient (3%) experienced no improvement (Table I).

Objectively, ten (31%) of these thirty-two patients showed improvement in their functional classification of one or more grades (Table I). Six of these had had symptoms for four or more years.

The one patient with *rheumatoid spondylitis* show-

TABLE I

RHEUMATOID ARTHRITIS

Case	Age	Approx. Duration Years	Followed on Phenylbutazone Months	Function (Class) Pre-Rx	Post-Rx	Subjective Response*	Complications**
1	27 w/f	9	11	II	II	2+	Indigestion, rash, anemia
2	63 w/f	2 mo.	9	II	I	4+	O
3	67 w/f	16	4	IV	III	1+	O
4	57 w/m	9	5	II	II	1+	Anemia, purpura—DC
5	59 w/f	20	3	II	II	3+	O
6	46 w/f	11	6	II	II	3+	O
7	45 w/f	4	8	II	I	4+	O
8	52 w/m	10	3	II	II	2+	Hematuria—DC (History of renal colic)
9	53 w/m	4	12	II	I	3+	O
10	59 w/f	19	4	II	II	2+	Anemia—DC
11	54 w/m	7	1	III	III	0	Refused to follow directions—DC
12	52 c/f	1.5	1	III	II	3+	O
13	40 c/f	15	16	II	I	3+	Nausea initially
14	52 w/f	1.5	7	III	II	3+	Mild anemia
15	54 w/f	15	1	I	I	3+	Mild anemia
16	46 w/m	4	2	II	II	1+	Nausea
17	43 w/m	2	2	II	II	2+	O
18	41 c/f	5	4	III	III	2+	O
19	20 w/f	4	6	II	II	3+	Hematuria—DC
20	41 w/m	11	13	IV	II	3+	O
21	52 w/f	13	1	II	II	3+	Nausea, vomiting, rash—DC
22	39 w/f	12	14	II	II	3+	Stomatitis, diarrhea
23	44 w/m	6	7	II	II	2+	Congestive failure after myocardial infarction—DC
24	51 w/m	5	13	II	II	3+	Mild edema
25	57 w/m	9	1	II	II	1+	O
26	31 w/f	3	3	II	II	2+	O
27	48 c/m	4	3	II	II	1+	O
28	55 w/f	1	10 da.	II	II	2+	Nausea—DC
29	30 w/f	12	6	IV	III	2+	O
30	37 w/f	4 mo.	7	II	II	3+	O
31	30 w/f	1	3	II	I	3+	Nausea initially
32	29 w/m	1	6	II	II	2+	Mild anemia
			RHEUMATOID SPONDYLITIS				
1	29 w/m	6	15	III(?)	II	3+	O

* 4+—complete relief; 3+—marked relief; 2+—moderate relief; 1+—slight relief; O—no relief.
** DC—Drug discontinued.

ed marked improvement on phenylbutazone, although the disease had been present for six years. He seemed to be getting worse in spite of X-ray, physiotherapy, and cortisone. He improved a few days after starting phenylbutazone and has continued to show progressive improvement on a maintenance dose of 200 mg. daily.

Mixed Rheumatoid and Osteoarthritis—(See Table II). Four (44.5%) of the nine patients in this group experienced 3+, while five (55.5%) obtained 1-2+ subjective improvement. None obtained complete relief, but all experienced worthwhile improvement.

Miscellaneous Conditions—Table III gives the pertinent data in this group. The list is too small to illustrate adequately the reported usefulness of phenylbutazone in the broader categories of rheumatic disorders. Note that a case of gout was not available for inclusion in Table III. The one patient with bursitis obtained complete relief promptly after beginning phenylbutazone, although X-ray therapy, aspiration and procaine instillation had not been helpful. Five of the other six patients in the group obtained 2-3+ subjective improvement.

TABLE II

MIXED—RHEUMATOID AND OSTEOARTHRITIS

Case	Age	Approx. Duration Years	Followed on Phenylbutazone Months	Response to Therapy*	Complications**
1	57 w/f	10	2	2+	Nausea—DC
2	70 c/m	5	12	3+	Mild anemia
3	65 w/f	5	10	3+	Mild anemia
4	78 w/m	20	14	3+	Indigestion—History of ulcer
5	57 c/f	11	2	2+	O
6	76 c/f	2	7 da.	1+	No follow-up
7	69 w/f	12	14 da.	3+	Rash—DC
8	69 w/m	12	6	2+	O
9	50 w/m	7	3	2+	O

* ** See foot-notes, Table I.

Toxicity—All investigators have reported some untoward effects from phenylbutazone. These experiences are similar. The drug was stopped in ten patients in this study because of untoward reactions, which then subsided promptly. In twelve others the reactions did not necessitate stopping it.

Toxic reactions for which the drug was stopped were: hematuria in two; moderate anemia in one; marked anemia and purpura in one; nausea, vomiting, and a macular rash in one; nausea alone in two, macular rash alone in one. One patient developed acute myocardial infarction followed by peripheral edema, so the drug was discontinued. One patient (Case 2, Table III) who had pylorospasm, by history and by X-ray before beginning phenylbutazone, developed a macular rash after taking it for a week, but the drug was continued and the rash disappeared. However, after two months on the drug an active duodenal ulcer was demonstrated by history and X-ray. The drug was discontinued, and the patient placed on an ulcer regimen. Epigastric symptoms disappeared promptly and another X-ray examination one month later revealed no ulcer, pylorospasm or duodenal deformity. Meanwhile, pain in the hip and shoulder girdle recurred.

Mild reactions which did not necessitate stopping phenylbutazone. Mild nausea in four and slight anemia in six patients did not persist even though the drug was continued. Mild edema in one patient was controlled by reducing the sodium intake. One patient who had had aphthous stomatitis intermittently for fifteen years had severe exacerbations whenever she took phenylbutazone for as long as a week. By taking the drug intermittently for 2-4 days this complication was partially controlled. Significant leukopenia was not observed. Although some type of reaction was noted in twenty-two patients (45%), in only ten (20%) was it considered necessary to discontinue the drug.

DISCUSSION

Phenylbutazone is not curative, but many patients with long-standing rheumatism obtain worthwhile and often dramatic relief from it when other measures have failed. Arthritis recurs when the drug is stopped, if the disease is still active. Failure to recur promptly seems to imply a remission, which cannot be attributed, yet, to phenylbutazone. It is

interesting that the disease does not seem to become refractory to phenylbutazone once it has been effective and repeated courses seem to be as effective as the first one.[5]

The improvement, the incidence and types of toxic reactions to phenylbutazone noted here are similar to those reported previously.[1,2,3,4,5,6] No lasting or alarming toxic effects were noted, even in nine patients who took the drug for twelve months or longer.

Phenylbutazone was substituted partially or completely for cortisone in several patients who had previously been relieved by nothing else. Several patients thought phenylbutazone provided more subjective relief than cortisone.

There is a striking parallelism in the sequence of relief afforded by cortisone and phenylbutazone, although there are few comparable physiological effects. Rest pain is usually improved in two to four days, passive motion in three to six days, active motion in five to ten days, comfortable weight-bearing and increased range of locomotion in seven to fourteen days. Reduction in swelling usually lags for fourteen or, at times, many more days. Similar comparisons of corticotropin and phenylbutazone have been reported.[10] Animal experiments have attributed analgesic, anti-inflammatory, antihistaminic, antipyretic, uricosuric and other properties to phenylbutazone.[5,11] These effects do not seem to explain its striking anti-arthritic properties entirely. More knowledge of the pharmacology of phenylbutazone is needed.

Cortisone and phenylbutazone tend to cause retention of sodium and activation of peptic ulcers. Phenylbutazone does not have the cortisone disadvantages of promoting the reactivation of tuberculosis, osteoporosis, potassium deficiency, reduced carbohydrate tolerance, negative nitrogen balance, acne, hirsutism, abnormal fat distribution, hypertension, and thrombosis.

Phenylbutazone has been reported to be of definite value in the treatment of the following: rheumatoid arthritis, osteoarthritis, rheumatoid spondylitis, acute gouty arthritis. Its use has been favorably reported, although its value cannot be regarded as established in the treatment of the following: psoriatic arthritis, mixed arthritis, osteo-arthritis of the spine, acute peritendinitis, acute myofibrositis, herniated nucleus pulposus, degenerative disease of the hip, capsulitis, bursitis, epicondylitis, fibrositis, calcific tendinitis, reflex dystrophy, post-menopausal arthralgia, scleroderma with arthropathy, and lumbosacral sprain.[5]

The following toxic reactions to phenylbutazone have been reported elsewhere:[5] rash, edema, G-I upsets, stomatitis, reactivation of peptic ulcer, G-I hemorrhage, anemia, leukopenia, thrombocytopenia, agranulocytosis, purpura, hematuria, euphoria, vertigo, nervousness, insomnia, blurred vision, salivary gland swelling, hemoptysis, and drug fever (with or without rash).

The most commonly reported reactions have been gastro-intestinal upsets, edema and drug rash. The incidence of gastro-intestinal upsets can be markedly

TABLE III
MISCELLANEOUS

Case	Age	Diagnosis	Approx. Duration Years	Followed on Phenylbutazone Months	Response to Therapy*	Complications**
1	47 w/f	Unclassified Spondylitis	15	12	2+	O
2	58 w/f	Osteoarthritis, Fibrositis	1.5	2	2+	Rash, duodenal ulcer—DC
3	58 w/f	Fibrositis	4 mo.	8	3+	O
4	42 w/m	Traumatic Osteoarthritis	4	2	0	O
5	41 w/f	Traumatic Osteoarthritis	12	14 da.	3+	O
6	56 w/m	Osteoarthritis	1	3	2+	O
7	56 w/m	Bursitis	2 da.	8	4+	O

* ** See foot-notes, Table I.

decreased if the drug is taken with food. The edema has been shown to result from a temporary decrease in urine volume coupled with significant retention of Na+ and Cl- ions.[12,13] It can be controlled, usually, by moderate restriction of sodium intake. Severe restriction of sodium intake plus diuretics may be necessary. In most cases the drug rash needs no treatment. In others it can be controlled by antihistamines or by small doses of cortisone for a few days. If the rash requires treatment, it is advisable to stop the drug until it clears. Phenylbutazone has been resumed successfully with lower doses elsewhere. Every precaution should be taken, if the drug is resumed, to stop it promptly at the first sign of another rash.

The reduced hemoglobin, hematocrit and red blood cell counts do not represent true anemia in most instances, but are due to hemodilution.[5,9] Hemoglobin of 10.5 to 11.0 gm., red blood cell counts of 3,500,000-3,800,0000, and hematocrit readings of 35-38 are not unusual during the first few weeks of treatment. Hence, it is not necessary to stop the drug unless the anemia is progressive or severe.

Other *reactions which usually subside even though the drug is continued* are: vertigo, nervousness, slight leukopenia, euphoria and insomnia.

Agranulocytosis from butazolidin has been reported in fifteen patients in the American literature.[14-25]. Three of them died.[18,20,25]. A duodenal ulcer perforated in one of them.[25] The appearance of agranulocytosis or significant leukopenia are definite indications to stop the drug, although it has been reported[14] that three such patients resumed therapy without recurrence. One fatality from thrombocytopenic purpura,[26] two cases of severe exfoliative dermatitis.[27,28] one of whom died.[28] and one death from erythema multiforme bullosum[29] have been reported. These mortality figures compare favorably with the two deaths and about twenty violent alarming anaphylactic reactions from aspirin, and the eleven deaths from cardiovascular accidents in one hundred and seventy-five cases while taking cortisone, which have been observed in this clinic. It is proper to point out that all of the deaths in the cortisone series were in the decades of high incidence of cardiovascular accidents.

Other *reactions which demand prompt cessation of the drug* are: reactivation of peptic ulcer, G-I hemorrhage, hematuria, thrombocytopenia, severe stomatitis, and generalized allergic reactions.

The mechanisms by which these varied reactions are caused have not been studied adequately. Most reactions are attributed to the "toxicity" of the drug. Allergic reactions are not thought to be common.

Obviously, *phenylbutazone should never be administered casually.* The following precautions should always be observed:

(1) Treatment should not be instituted until detailed history, physical and laboratory examinations have been made and evaluated.

(2) *Phenylbutazone should not be given,* without due consideration of the risk involved, *when there are:*
   (a) The likelihood of or actual heart failure.
   (b) Symptoms of present or past peptic ulcer.
   (c) Renal, hepatic, or cardiac damage.
   (d) History of drug allergy.
   (e) History of blood dyscrasia.
   (f) Other concurrent drugs which may increase possibility of toxic reactions.
   (g) No facilities for or cooperation in the observance of the recommended precautions.
   (h) Simpler regimes which have not been tried.

(3) The maximum initial daily dosage in adults should not exceed 600-800 mg. for three or four days. The routine initial dose now used in this clinic is four doses of 100 mg. daily. The minimum satisfactory maintenance dose is determined by gradual reduction of the daily dose. Many patients retain maximum improvement on daily doses of 100-200 mg. daily. The maintenance dosage should seldom exceed 300-400 mg. daily.

(4) Improvement is noted usually within two to six days. If none has occurred within seven to ten days, the drug should be discontinued.

(5) Frequent follow-up visits are imperative and should include:
   (a) Verbal and physical examination for indications of the toxic reactions already noted.
   (b) Weight, to detect significant water retention.
   (c) Hematocrit, white blood count and platelet estimations at weekly intervals during the early phase of therapy, and at somewhat longer intervals thereafter, to ensure early recognition of blood dyscrasias.

(6) The importance of the following precautions should be impressed upon the patient:
   (a) Take only the recommended dosage, to lessen the chance of toxic effects.
   (b) Discontinue the drug and report to the physician immediately at the first sign of:
      (1) Fever, sore throat, lesions of the mouth.

(2) Black or tarry stools or other evidence of abnormal bleeding.
(3) Peptic ulcer symptoms.
(4) Skin rash.
(5) Any rapid increase in weight or edema of the ankles.

When the above precautions are employed and the drug is given in rational doses, it is believed that the benefits to be derived from phenylbutazone outweigh the risks of serious toxic effects from it.

Summary and Conclusions

The effect of phenylbutazone was observed in forty-nine patients, of whom forty-one had either chronic rheumatoid arthritis or mixed rheumatoid and osteoarthritis. Marked subjective improvement was noted in twenty and definite improvement in twenty of the forty-one patients. One patient experienced no improvement. Measurable objective improvement, observed in ten of these patients, took longer and was less impressive than subjective relief and improvement in simple locomotion.

Twenty-two (45%) of the forty-nine patients had some toxic symptoms. These were of sufficient severity to warrant discontinuing the drug in only ten (20%). Nausea, lowered hemoglobin level, skin rash, hematuria, peripheral edema and stomatitis were among the toxic effects noted. All toxic reactions subsided promptly. Other reported toxic effects are listed.

Phenylbutazone is not an innocuous drug and should not be administered casually. The physician prescribing the drug and the patient taking it should be thoroughly familiar with its possible undesirable effects. Precautions for the physician and instructions for the patient are listed. *When these precautions are observed*, it is believed that phenylbutazone is a valuable addition to the treatment of a number of rheumatic diseases and that its benefits outweigh the risks.

Six of the seven patients with miscellaneous conditions obtained moderate to complete relief.

Phenylbutazone brings relief promptly, in a few days, or not at all.

Bibliography

1. Kuzell, W. C.; Schaffarzick, R. W.; Brown, B., and Mankle, E. A.: J.A.M.A., 149:729 (June 21) 1952.
2. Stephens, C. A. L., Jr.; Yeoman, E. E.; Holbrook, W. P.; Hill, D. F., and Goodwin, W. L.: J.A.M.A., 150: 1084 (Nov. 15) 1952.
3. Steinbricker, O.; Berkowitz, S.; Carp, S.; Ehrlich, M., and Elkind, M.: J.A.M.A., 150:1087 (Nov. 15) 1952.
4. Bryon, C. S., and Orenstein, H. B.: N. Y. State Med. J., 53:676 (March 15) 1953.
5. Hemming, A., and Kuzell, W. C.: Antibiotics and Chemotherapy, III, No. 6, June, 1953.
6. Platoff, G. E.: J. Mich. State Med. Soc., 52:980 (Sept.) 1953.
7. Modern Drugs, 938, May, 1954.
8. Manual for Arthritis Clinics. New York: Arthritis and Rheumatism Foundation, 1952.
9. Brodie, B. B.; Lowman, E. W.; Burns, J. J.; Lee, P. R.; Chenkin, T.; Goldman, A.; Weiner, M., and Steele, J. M.: Am. J. Med., XVI: 181 (Feb.) 1954.
10. Mason, R. M.: Ann. of Rh. Dis., 12:82 (June) 1953.
11. Currie, J. P.; Peebles Brown, R. A., and Will, G.: Ann. of Rh. Dis., 12:88 (June) 1953.
12. Wilkinson, E. L., and Brown, H.: Am. J. M. Sc., 225:153, 1953.
13. Chenkin, T., *et. al.*: Federation Proc. 12:310, 1953.
14. Kuzell, W. C., and Schaffarzick, R. W.: California Med., 77:319, 1952.
15. Hinz, C.; Lamont-Havers, R. W.; Cominsky, B., and Gaines, L. W.: J.A.M.A., 151:38 (Jan. 3) 1953.
16. Bershof, E., and Oxman, A. D.: J.A.M.A., 151:557 (Feb. 14) 1953.
17. Stifel, J. L., and Burnheimer, J. C.: J.A.M.A., 151: 555 (Feb. 14) 1953.
18. Estess, A. D., and Jacobson, A. S.: J.A.M.A., 151: 639 (Feb. 21) 1953.
19. Werblow, S. C., and Neher, J.: J.A.M.A., 151:1286 (April 11) 1953.
20. Steinberg, C. L.; Bohrod, M. G., and Roodenburg, A. I.: J.A.M.A., 152:33 (May 2) 1953.
21. Heck, F. J.: Postgrad. Med., 13:185, 1953.
22. Brandwein, S.: N. Y. State Med. J., 53:13, 1577, 1953.
23. Archer, B., and Kantor, M. G.: N. Y. State Med. J., 54:3, 394, 1954.
24. Kiely, J. M., and Stickney, J. M.: Proc. Staff Meet., Mayo Clinic, 28:341 (June 17) 1953.
25. Beutler, E., and Bergenstal, D. M.: Gastroenterology, 25:72 (Sept.) 1953.
26. Feldman, L.; Cohnen, F., and Hirsch, H.: Ill. Med. J., 105:83 (Feb.) 1954.
27. Fishman, H. C., and Reynolds, J.: J.A.M.A., 153:642 (Oct. 17) 1953.
28. Nathan, D. A.; Meitus, M. L.; Capland, L., and Lev, M.: Ann. Int. Med., 39:1096 (Nov.) 1953.
29. Cone, R. B.; Hannigan, C. A., and Teicher, R.: A.M.A. Arch. Dermat. Syph., 69:674 (June) 1954.

Intra-Orbital Tumors and Progressive Exophthalmos

WINCHELL McK. CRAIG, M.D.
Rochester, Minnesota

Transcranial Removal of Intra-Orbital Tumors

PRIOR to 1945 there were reported from the Mayo Clinic 35 cases in which orbital tumors were removed transcranially. From January, 1945, until December, 1952, an additional 73 orbital new growths were surgically treated at the clinic by this method. Progressive asymmetric exophthalmos and failing vision are obviously a primary ophthalmologic problem, for there are inciting causes other than orbital neoplasms. Many of these can be cared for in the Section of Ophthalmology, but closer co-operation among the ophthalmologist, the radiologist, and the neurosurgeon, and utilization of the cranial orbital approach may be used more frequently in the preservation of vision and maintenance of ocular function. In the analysis of data on the 73 cases in which operation was performed between January, 1945, and December, 1952, Love and Dodge[1] found that 40 patients were female and 33 were male. The youngest patient was 2 months old and oldest was 73 years. Thirty-seven patients had tumors in the right and 35 in the left orbit. One child had tumors bilaterally. The longest duration of symptoms was 12 years and the shortest 1 week. The universal complaints were progressive asymmetric proptosis and blurred or failing vision.

Varying degrees of progressive proptosis were common to all patients, and visual loss was common to most. Limited motion, restricted gaze and muscle weakness in the affected eye, with the resultant complaint of double vision, occurred frequently.

The inability of the examiner to displace the globe back into the orbit offered contributory evidence of an increase in intra-orbital soft tissue. Frequently, a mass could be palpated. Pulsation of the eye, intermittent or constant, and an auscultatory bruit lend added weight to the diagnostician's suspicion. In arriving at a diagnosis a careful study of the roentgenograms of the head and orbit is important (Table 1). Of the 73 patients, 44 showed demonstrable roentgenographic changes.

The Section of Roentgenology considers that an adequate study for the orbit might include (1) routine roentgenogram of the skull with stereoscopic lateral views; (2) views of the optic canals; (3) the Caldwell position; (4) the Waters position, and (5) occasionally, stereoscopic views of the base of the skull.

Table 2 shows the numbers of the different kinds of intra-orbital tumors removed by transcranial operation in 1945 through 1952.

The final decision as to the surgical treatment for intra-orbital tumors remains with the ophthalmologist, the radiologist and the neurosurgeon. The following, in the opinion of my colleagues and myself, are indications favoring the transcranial approach to to the orbits:

1. Deep orbital neoplasm (involvement of the orbital apex or superior orbital fissure).
2. Progressive proptosis and visual loss with increasing evidence of circulatory disruption (chemosis, keratopathy) in the absence of metabolic disease, palpable mass or roentgenographic changes.
3. Suspicion or evidence of cranio-orbital or orbito-cranial extension
   (a) Involvement of the bone by tumor
   (b) Intermittent or constant pulsatile exophthalmos
   (c) Headache
   (d) Neurologic signs.
4. Evidence of a highly vascularized neoplasm.
5. Field and nerve-head changes indicative of early encroachment on the optic nerve with minimal pressure signs.
6. Palpable tumor mass anteriorly which the examining team feels may extend too far posteriorly to be removed easily by anterior or lateral approach.

The advantages offered by transcranial approach to the orbits are (1) excellent direct visualization of the orbital contents and extent of lesion; (2) minimal necessity for palpatory exploration (lessened trauma to soft tissue); (3) more adequate control of hemorrhage by means other than pressure; (4) added decompression of orbital contents; (5) opportunity for exploration of optic nerve, optic chiasm and adjacent

WINCHELL McK. CRAIG, M.D., *Section of Neurologic Surgery, Mayo Clinic and Mayo Foundation.*

Read at the Spring Congress in Ophthalmology and Otolaryngology of the Gill Memorial Eye, Ear, Nose and Throat Hospital, Roanoke, Virginia, April 5 to 10, 1954.
The Mayo Foundation is a part of the Graduate School of the University of Minnesota.
Received for publication April 23, 1954.

brain areas; (6) simultaneous removal of bilateral tumors; (7) utilization of intrahairline incision, which results in little postoperative cosmetic defect, and (8) opportunity for total removal of benign or low-grade malignant tumors.

Surgical Treatment of Progressive Exophthalmos

Progressive exophthalmos associated with exophthalmic goiter and often encountered after subtotal thyroidectomy may become a distressing, painful and disabling condition and present a difficult therapeutic problem.

While progressive exophthalmos occurs in only about 1 case per 1,000 of primary hyperthyroidism, it is a condition which requires observation and surgical treatment if conservative treatment fails. As with so many other conditions in the body, orbital decompression to be effective must be carried out before the intra-orbital contents have been damaged beyond repair and while the muscles and fat are resilient enough to take advantage of the increased space. Operation for the relief of progressive exophthalmos is not new. Dollinger, in 1911, was one of the first to use the Kronlein procedure. Since that time every space or potential space about the orbits has been used, by one person or another, in orbital decompression for the relief of progressive exophthalmos.

The most radical procedure and the one which has gigen best results consisted of a transcranial decompression of the orbit which was first outlined and carried out by Naffziger.

In close collaboration with the members of the Section of Ophthalmology, my colleague and I have come to the conclusion that transcranial decompression may be indicated when the Hertel reading is in the range 25 to 35 mm., and when the vision is threatened because of exposure keratitis, progressively severe chemosis, papilledema or visual field defects. The operation carried out at the Mayo Clinic is a modification of the Naffziger operation and consists of a bifrontal extradural craniotomy through a modified Souttar incision. The patient has previously been anesthetized with thiopental sodium (pentothal sodium) and curare has been given intravenously. A Magill endotracheal airway is inserted, and oxygen with nitrous oxide is administered during the entire operative procedure. My colleagues and I have found it very helpful to have a plastic needle placed in the intrathecal space in the lumbar region. Since the dura is exposed, cerebrospinal fluid is aspirated through the plastic needle into a large glass syringe. It is usual to remove 50 cc. of fluid into a sterile syringe, the fluid being replaced later. Also previous to the operation the eyelids are closed with three interrupted silk sutures. The blepharorrhaphy not only protects the eyes but also prevents postoperative edema. The dura is then stripped away from the orbits, and the roof and lateral wall of the orbit are completely removed. Once maximal bony decompression has been attained, the periorbita is incised in a stellate manner, allowing the contents of the orbit to decompress into the anterior fossa. The bone is then replaced and the skin flap is sutured with interrupted sutures of steel wire. The sutures of the eyelids are removed from 6 to 12 days following operation, depending on the severity of the protrusion.

Results of Operation.—The experience of the Mayo Clinic with transcranial orbital decompression for the relief of malignant exophthalmos as reported by Craig and Dodge[2] began in 1934 and is based on 28 cases. Twenty-one patients required bilateral unroofing of the orbits, and 2 required unilateral decompression. There were 5 other cases of malignant unilateral protrusion in which the diagnosis of thyroid disease was suspected but unproved. These 5 cases are not part of the statistical data that follow.

The average age of the 23 patients with proved exophthalmic goiter was 48 years; 15 of the patients were female and 8 were male. Eight patients of this group had not undergone operations on the thyroid gland, the malignant progressive changes in the eye having occurred during the toxic phase of their goiter.

Six weeks to 1 year was the usual interval encountered between subtotal thyroidectomy and evidence of progessive exophthalmos. One patient failed to show any interval. Acute progression required in our cases as little as 4 weeks, and as long as 3 years. Except for the 8 patients in the toxic phase, basal metabolic rates varied from normal to – 31 per cent. Nine patients underwent irradiation of the orbits prior to operation.

Maximal protrusion of the globes registered in this series was 36 and 38 mm. (Hertel measurements), and the least protrusion for which transcranial decompression was deemed advisable was 22 mm. bilaterally. Seventeen patients evidenced palsy of extra-ocular muscles, or paresis of conjugate vision preoperatively, although all patients had some limitation of ocular rotations. The rapidity of onset of the proptosis did not seem a determinant of muscle palsy. Corneal ulcers were already present in 4 cases at the time of operation.

Among all 28 patients who underwent decompression there has been 1 operative death. This was in our first case, that of bilateral orbital decompression performed on a 76-year-old white man in 1934. Except for the loss of a bone flap due to osteomyelitis in a case of unilateral decompression, there have been remarkably few complications attributable to craniotomy.

One globe was lost postoperatively. In 1 patient intracranial operation did not affect the course of her malignant progression. She subsequently became blind. Four patients suffered from corneal ulcerations and 2 of these had hypopyon following operation, but the most frequent postoperative difficulty was paresis of extra-ocular muscles. The diplopia experienced has proved troublesome and persistent. Pulsation of the globes has not been a serious postoperative complaint.

Four to 5 mm. was the usual amount of ocular recession recorded during the first year after intracranial decompression. In all but 1 case the condition became arrested, and recovery, although initially rapid, later tended to become slow and the path beset with minor obstacles. A number of patients convalesced for 6 to 9 months before they admitted the beginning of relief of annoying subjective symptoms. Edema of the lids frequently persisted over long periods.

It is unreasonable to expect excellent cosmetic results, visual improvement and symptomatic relief when late vascular and fibrodegenerative changes in the orbit become irreversible. In the past 10 years a noticeable reduction in morbidity and mortality rates from transcranial operations has occured. Earlier intervention and decompression before corneal, optic nerve and orbital changes vitiate results seem indicated. The occasional unnecessary unroofing of an orbit inherent in the plan for early surgical treatment of this condition seems more than counterbalanced by the opaque cornea resulting from a missed opportunity. Intracranial orbital decompression for cosmetic purposes has been condemned in the past, but at present my colleagues and I are inclined to be less adamant in respect to this viewpoint when it concerns professional persons and certain women who have been thoroughly oriented as to facts and figures pertaining to the operation.

At all times in handling the prospective surgical patient, it well to inform him that transcranial orbital decompression is not a cure, but a crutch to lean on until his own bodily economy as it affects his eyes, supplemented by such replacement therapy as is available, can be adequately readjusted. Statements regarding the postoperative cosmetic result should be guarded. Return of the eyes to normal position is possible but not to be promised, although marked

Table 1

Roentgenographic Changes With Orbital Neoplasms (1945-1952)

Erosion of bone	Enlargement or erosion of superior orbital fissure or both
Osteomatous thickening of bone	Calcification in orbit
Soft-tissue density in orbit	Thickening of orbital plate
Enlargement or erosion of optic canal or both	Calcification along course of optic nerve
Enlargement or erosion of orbit or both	Orbital phleboliths

Table 2

Intra-Orbital Tumors Removed by Transcranial Operation (1945-1952)

	Cases
Meningioma	19
Intra-orbital	8
Intra-orbital and intracranial	11
Hemangioma*	9
Astrocytoma (glioma)	5
Pseudotumor (inflammatory?)	5
Metastatic carcinoma	5
Hemangio-endothelioma	4
Adenocarcinoma of the lacrimal gland (cylindroma)	3
Neurofibroma	3
Fibrous dysplasia of bone	3
Sarcoma	2
Mixed tumor	2
Lipoid granuloma	1
Fibroma	1
Epidermoid	1
Pyocele	1
Epidermoid carcinoma	1
Malignant melanoma	1
Osteoma	1
Chordoma	1
Hematoma	1
Desmoid	1
Meningo-encephalocele	1
Lipoma	1
Unidentified malignant lesion	1
Total	73

*Majority cavernous but some mixed capillary cavernous

improvement is common. Progressive improvement may take place for years.

In conclusion, then, progressive exophthalmos which does not respond to the usual methods of medical or radiologic therapy is regarded as malignant. If uncontrolled, this condition progresses to the point where papilledema occurs and, if persisting, may result in loss of vision and optic atrophy. The exposed cornea with decreased nutrition becomes traumatized, and corneal ulcers develop. The conjunctiva becomes inflamed, and the final result may be blindness and enucleation of the globe.

Thus malignant exophthalmos assumes a very sinister clinical aspect. Surgical relief for the increased intra-orbital pressure has been described and used in several different forms. The most nearly complete method has been described by Naffziger, and with certain modifications it has been adopted by most neurosurgeons. The intracranial decompression of the orbits with removal of the superior and lateral orbital walls allows for the most nearly complete relief of pressure.

References

1. Love, J. G., and Dodge, H. W.: Transcranial Removal of Intraorbital Tumors. Arch. Surg. 67: 370-379 (Sept.) 1953.
2. Craig, W. McK., and Dodge, H. W., Jr.: The Surgical Treatment of Malignant Exophthalmos. S. Clin. North America. 32: 991-1003 (Aug.) 1952.

Causes and Cures for Backaches

Standing erect may help distinguish man from the animals but it certainly lets him in for a lot of trouble. Dr. James A. Tobey, Newton, Conn., said the human skeleton "is not particularly well adapted to the upright position," except for a short time when a man is young, "lean, lithe, and buoyant." The rest of his lift, he is particularly prone to backache and other ills which might not occur "if he ran on all fours," Dr. Tobey said in the February Today's Health magazine, published by the American Medical Association.

Instead of actually standing erect, many people "slouch and sag, droop and sway," sometimes because of fat or cares and emotional stresses. Other factors are extra high heels, occupational hazards, later stages of pregnancy, strains, and disease. Faulty body mechanics is one of the most common causes, one of the most important, and usually the easiest to correct. The one-third of each day spent in bed may be a factor. Mattresses should be flat and even, not too soft, and free of "hollows, lumps and slants." But a good mattress is not enough. There are 57 other possible causes of backache.

One of the most significant is a sudden strain, including a twist, a sudden jerk, or lifting a heavy weight with the back instead of the arms. Communicable disease such as influenza, pneumonia, malaria, typhoid fever, and smallpox are almost invariably accompanied by backache. Low back pain, usually with mild fever, may indicate an invading virus, and calls for bed rest. Arthritis may also cause backache.

But almost half of "the poor aching backs with which the American people are afflicted" are the result of "deep-seated and vexatious nervous and emotional disorders. These back pains are not imaginary; they are very real, but mental stress is the actual culprit."

"Whether your aching back is caused by bad posture, strains, disease, organic lesions, ruptured disks, or emotional tension, in many cases it could have been prevented and in most instances it can be effectively treated." "It is, of course, much better to try to prevent the affliction. This generally can be accomplished by maintenance of good general health, by proper posture, by avoiding overweight, by preventing strains and accidents, by dodging contagions, and by the cultivation of good mental hygiene."

Dr. Tobey notes that "these are not always simple matters in our complex civilization," but they can be attained and are well worth it.

General Considerations of Cortisone and ACTH Therapy

STUART H. CATRON, JR., M.D.
Abingdon, Virginia

AMONG the hormones arising from the anterior lobe of the pituitary and from the adrenal cortex, ACTH and cortisone have attained a unique place in the mind of the physician and in the imagination of the general public. Their effects have been widely publicized and embraced with enthusiasm won by such previous wonder drugs as insulin, liver extract, sulfas, antibiotics, and the antihistaminics. Remembering that only a few years ago magazines for the public reported antihistaminics as a "cure" for hay fever, we recall that there is no "cure-all" for human illness. Most important for all, therapeutic agents are swords with two edges: "They may heal, they also may kill".[1]

Cortisone and ACTH have been available commercially for about four years, and in the literature a large number of reports have appeared giving a clear idea of their value in many clinical conditions.

ACTH (adreno-corticotropin) is a potent extract obtained from the pituitary gland of domestic animals. Cortisone and six or seven similar adrenal cortical hormones have been produced by chemical synthesis and are now produced commercially on a large scale.

The understanding of the physiopharmacelogical interrelationships of these hormones is far from complete; concepts are changing daily, being modified by new discoveries.

ACTH acts on adrenal cortex to stimulate secretion of cortisone and hydrocortisone with suppression of autogenous ACTH production. Cortisone suppresses adrenal cortical secretions, as well as endogenous ACTH secretion, and tends to abolish the auto-regulating mechanism normally controlled by blood stream levels of the steroids. Their general effects may be outlined below:

1. Anti-allergic and anti-inflammatory—exudation is markedly decreased, probable increased destruction of histamine; prevention of lymphocytic and fibroblastic barriers, in turn decreasing the natural lines of defense.

2. Anti-mesenchymal action—large doses tend to inhibit proliferation of mesenchymal tissue; connective tissue repair is thereby decreased and scar formation greatly inhibited.

3. Metabolic action raises carbohydrate stores by decreasing use of capillary glucose, increasing utilization of fat, enhancing transformation of protein into carbohydrate; acting on renal tubules—sodium chloride and water retention, and potassium loss; stimulating androgenic activity in acne and hirsutism; altering enzymal production—increase in pepsin and trypsin.

4. Cortisone causes adrenal cortical atrophy; ACTH causes hypertrophy of adrenal cortex.[2]

Clinical Considerations

Both ACTH and cortisone have been widely used in the treatment of disease, and the following table compiled by Christian, Friend, and Schnitker[3] lists the various illnesses in which they have been reported to exercise some effects. (See table)

The fact that these fractions influence such a large group of apparently unrelated diseases would suggest two possibilities. First, that the pathological states have a common disturbance of adrenal cortical function which is fundamentally related to the cause of the disease; or, second, that the adrenal cortex simply participates in the general defense mechanisms of the body.[4]

It has been suggested that diseases in general arise as a result of adaptive mechanisms to stress, the adrenals playing the fundamental role. We may take issue with the authors on this point, but there is ample evidence to suggest the phenomenon does play a part in the evolution of certain disease states.

In a narrow sense this may be distinguished from the illnesses in which adrenals are attacked directly, such as occurs in Addison's disease on the one hand, or overt adrenal cortical hyperfunction on the other. Between these two extremes we have a large group of signs, symptoms, and syndromes as a result of the response of adrenal glands to various noxious stimuli, situations, and agents. Both ACTH and Cortisone have suppressive roles in disease, the symptoms are held in abeyance, the patients made more comfortable, but the underlying disease remains relatively unaltered.

The use of ACTH and cortisone in acute disease

Read at the Southwest Virginia Medical Society Meeting, Hotel Roanoke, Roanoke, Virginia, September 16, 1954.
Received for publication, October 14, 1954.

A. Disease in Which the Use of Hormones Is Advisable

Disease	Hormone	Results
Acute Drug Sensitivity	ACTH or Cortisone	Good to Excellent
Addison's Disease	Cortisone	Excellent, Supplemental Therapy Required
Adrenal Androgenic Hyperplasia	Cortisone	Helpful
Adrenal Cortical Insufficiency	Cortisone	Excellent
Anorexia Nervosa	Cortisone	Fair
Contact Dermatitis	ACTH or Cortisone	Good
Disseminated Lupus Erythematosis	ACTH or Cortisone	Fair; Holds Disease in Abeyance
Exfoliative Dermatitis	ACTH or Cortisone	Helpful
Hemolytic Jaundice	ACTH or Cortisone	Excellent in Acute Attacks
Hypoglycemia, Idiopathic	Cortisone	Excellent
Hypopituitarism, Functional or Organic	ACTH or Cortisone	Good to Excellent
Inflammatory or Allergic Diseases of the Eye (Acute choroiditis) (Acute iridocyclitis) (Acute iritis) (Acute keratitis) (Acute uveitis) (Sympathetic ophthalmia) (Vernal conjunctivitis)	ACTH or Cortisone	Good to Excellent
Loeffler's Syndrome	ACTH	Excellent
Periarteritis Nodoso	ACTH or Cortisone	Temporary Value; Inhibits Acute Process
Rheumatic Fever, Acute	ACTH or Cortisone	Useful in Arresting the Process
Serum Sickness	ACTH or Cortisone	Good
Toxic Agents	Cortisone	Excellent
Black Widow Poison; Snakebite		

B. Diseases in Which the Hormones Are Useful

Acute Dermatomyositis	ACTH or Cortisone	Fair
Bronchial Asthma	ACTH or Cortisone	Fair to Good in Acute Intractable Cases But Disease May Recur When Discontinued
Burns	ACTH or Cortisone	Helpful
Dermatomyositis	ACTH or Cortisone	Fair
Erythema Nodosum	ACTH or Cortisone	Fair
Gout, Acute	ACTH or Cortisone	Good—Relapse without Colchicine
Multiple Myeloma	ACTH or Cortisone	Fair (Blast Type)
Pemphigus	ACTH or Cortisone	Temporary Help
Psoriasis	ACTH or Cortisone	Clears; But May Recur
Pulmonary Beryllosis	ACTH or Cortisone	Temporary Help
Regional Enteritis	ACTH or Cortisone	Temporary Help
Rheumatoid Arthritis	ACTH or Cortisone	Excellent But Usually Recurs
Sarcoidosis	ACTH or Cortisone	Much Improvement
Ulcerative Colitis	ACTH or Cortisone	Fair
Urticaria	ACTH or Cortisone	Excellent
Vascomotor Rhinitis	ACTH or Cortisone	Excellent

C. Diseases in Which the Hormones Are of Limited Value

Atopic Dermatitis, Chronic	ACTH or Cortisone	Permanent Remissions Are Rare
Cancer	ACTH or Cortisone	Usually Poor Response
Leukemia and Lymphosarcoma	ACTH or Cortisone	Useful with Anti-Folic Acid Derivatives
Nephrotic Syndrome	ACTH or Cortisone	Useful, Producing Diuresis
Scleroderma	ACTH or Cortisone	Useful in Early Cases But Therapy Must Be Continuous
	ACTH or Cortisone	

D. Diseases in Which the Hormones May Be Harmful

Acne	Hirsutism
Congestive Heart Failure (Except Certain Cases of Failure Produced by Acute Rheumatic Fever)	Osteoporosis
Cushing's Syndrome	Hypertension
Peptic Ulcer	Tuberculosis (Possibly)
	Diabetes Mellitus

may seem mandatory. However, use in chronic affections must be decided individually with reference to the practical means of maintenance, recurrent courses and chance of improvement of the patient's state of health by a period of induced remission. For example, there is no satisfactory answer yet to these problems in the treatment of rheumatoid arthritis.

Since the hormones have far-reaching effects on the body as a whole, their administration in the home or office may become quite complicated or even dangerous. The physician must ask himself if the disease can be managed by conservative proven methods, such as aminophyllin, adrenalin, iodides in treatment of asthma, or salicylates, physiotherapy, rest and general nutritional care in rheumatoid arthritis. Whether he has had success on previous occasions with this patient on conservative measures, and is it the wiser to initiate newer, more dramatic but more dangerous treatment? Will he be able to follow certain precautions and assume the risk inherent in hormone administration?

Before treatment is started the patient should have a chest x-ray, blood sugar determination, complete blood count, urinalysis, Kahn, blood pressure and weight recordings. If there is any history of peptic ulcer, a gastrointestinal x-ray should be made, stools for occult blood; EKG's for heart damage and repeat at intervals, to discover potassium changes early; renal function tests should be made, and a search made for emotional and psychiatric difficulties. These observations should be repeated frequently during and after therapy, and the patient should be observed especially for weight gain, edema and glycosuria, and check on blood pressure. Furthermore, it is advised that the physician place the patient on low salt diet with supplemental potassium chloride 2 to 8 gms. daily.

Dosage and Administration

The general dosage schedule should be the smallest to control the disease process; free use of adjunctive agents for relief of symptoms is indicated. Before ACTH and cortisone are started, the patient must be made to understand the limitation of hormone treatment and the need for full cooperation made clear.[5] This will cushion the psychic insult on return of symptoms with the cessation of therapy. Cortisone (comp.E) may be administered intramuscularly in sterile aqueous suspension (micro crystals) 25 to 50 mg. at 8 hour intervals. This form of administration has no advantage over the oral route which is more rapidly absorbed and eliminated a little more rapidly, thus requiring a slightly higher dose, given on a 6 hour basis. Tablets are available in 5, 10, and 25 mg. size. Hydrocortisone (comp.F.)—a little more refined than cortisone is available for systemic and intra-articular use. Its action parallels that of cortisone, its main advantage is one of dosage, 2/3 that of cortisone, thereby the untoward effects lessened. Used intra-articularly, the dose is 20-25 mg. injected into a joint at 7 to 21 day intervals, being repeated only if necessary.

Topically, cortisone and hydrocortisone are prepared as ointments in 1 and 2½% strength. It is to be pointed out that intra-articularly and topically these compounds have little or no systemic effect. ACTH may be given 5 to 25 mg. every six hours in saline solution; gels, aluminum phosphate or various depo agents given once daily in doses of 20 to 40 mg. or less.

Conditions that Complicate or Contraindicate Cortisone and ACTH Therapy

The therapeutic effects of cortisone and ACTH in many conditions depend on their ability to alter reaction of body tissues to noxious stimuli.[6] The following conditions may be mentioned:

First. In many diseases the noxious stimulus is not known. Often only the inflammatory reaction at specific sites is the disease process as clinically recognized. For example, in a patient suffering from rheumatoid arthritis, such suppressive therapy may constitute adequate control. But in infectious disease, particularly pulmonary tuberculosis, the suppression of tissue reactivity may led to dissemination, while the patient's temperature, leukocyte count and clinical appearance may remain unaltered or improved.

Second. Because of the host altered reaction to peritoneal irritation, the diagnosis of perforation may be difficult in the cortisone treated individual; normal temperature, pulse, blood pressure, and the absence of abdominal rigidity and leukocytosis have been referred to in the literature.[7]

Third. One of the most important complications of therapy is gastrointestinal ulceration with bleeding or perforation. An increase in hydrochloric acid and pepsin in gastric juice has been observed, and reactivation of peptic ulcer has been a repeated experience.

Fourth. Symptoms and signs of Cushing's syndrome, edema, fullness of the face, acne, hirsutism, striae, hypertension, glycosuria, menstrual changes, personality changes with depression even to frank psychoses. This category, especially the edema and hypertension, may proceed rather rapidly to frank

cardiac failure.

Fifth. A group classified as other general complications—that is a mild diabetic made into a frank state of diabetes. Wound healing is markedly delayed, and all bleeding tendencies aggravated. Osteoporosis, generalized type, may go ahead to possible fracture.

Sixth. It has been claimed that adrenal atrophy resulting from cortisone therapy can be reversed by stimulating doses of ACTH during or after cortisone therapy. Although this is undoubtedly true, the duration of treatment and the dosage of ACTH necessary to bring this about is not known; and one cannot be sure of the function and integrity of adrenal cortex. Both ACTH and cortisone cause changes in the pituitary, and it is therefore difficult, when using the stimulative dose of ACTH following and during cortisone therapy, for us to develop any true and really lasting protection against subsequent stress. Any stress situation, trauma or surgical operation may precipitate full-blown acute adrenal insufficiency and death.[8]

Finally. ACTH may cause anaphylatic reaction, convulsions and death.

The absolute contraindications agreed upon by all major authorities are an acute psychosis, active peptic ulcer, tuberculosis and syphilis, hypertension (especially for the use of ACTH), congestive heart failure due to mechanical defects, subacute and chronic glomerulonephritis with marked azotemia, and acute bleeding tendencies.

In summary, a consideration of the value of ACTH and cortisone in certain diseases is presented.

1. Therapeutic doses result in physiologic disturbances of pituitary and adrenal relationship, which continue for an uncertain period of time following cessation of therapy.

2. Their usage must be accepted as a calculated risk.

3. Their usage may render the patient deficient in adrenal cortical hormones during periods of stress, i.e., trauma, surgery, infection, *et cetera.*

4. A plea is made for more rational use of hormone therapy, reduction of dosage schedules, so that their remarkable and beneficial results may be utilized to the best advantage.

References

1. Hansen-Pruss, O. C.: Present Status of ACTH and Cortisone Therapy in Treatment of Asthma. Southern Medical Journal. Vol. 46, No. 8, P. 814 (1953).
2. Zimmer, Fredrick E.: Difficulties Encountered in Therapeutic Use of Cortisone and ACTH. American Practitioner. Vol. 5, No. 7, P. 511 (July, 1954).
3. (Table) Medical Treatment of Disease—Oxford Looseleaf. Chapter II, Vol. VIII.
4. Thorn, G. W.; Forsham, P. H.; Frawley, T. F.; Hill, S. R., Jr.; Roche, Marcel; Staehelin, Dietrich, and Wilson, D. L.: The Clinical Usefulness of Cortisone and ACTH. New England J. Med., 242: 783, 1950.
5. Soffer, L. J.: ACTH and Cortisone—Physiological and Clinical Considerations. Medical Clinics of North America, P. 791 (May, 1952).
6. Forsham, Peter H.: Present Status of ACTH and Cortisone Therapy. Med. Clinics of North America, P. 1229 (Sept. 1951).
7. Zimmer, Fredrick E.: (Same as 2).
8. Zimmer, Frederick E.: (Same as 3).

Johnston Memorial Clinic.

New Use for Polo Belts.

People who wear polo belts are not necessarily polo players, according to a Chicago physician.

Dr. Philip Lewin said for 35 years he has prescribed the wide, buckled polo belts for various back troubles, such as strains at waist level and lumbago. With heavy elastic webbing inserted in the sides, the belts are helpful when shoveling snow, playing golf, gardening, and carrying the baby, he said in the January 1 Journal of the American Medical Association.

Confirmation of his theory came from a department store clerk in New York City. She told him that on snowy or bad-weather days she makes about 20 sales—and out of 100 persons who buy polo belts, only one is a polo player.

Intestinal Obstruction Due to Metastatic Melanotic Sarcoma Nine Years After Removal of Primary Tumor

MAURICE A. MICHAEL, M.D., F.A.C.S.
Suffolk, Virginia

INTUSSUSCEPTION is the most important cause of intestinal obstruction in children, but in the adult it occurs less frequently. The clinical diagnosis is much less obvious than in children. An etiologic factor was demonstrated in only 5% of cases in infants reported by Ladd and Gross[1]—(quoted by Bancroft and Wade). In adults the etiology is disclosed in about 70% of cases,, usually a tumor or a Meckel's diverticulum.[1] Removal of the cause is essential. Tumors of the small intestine are relatively infrequent and melanomas comprise a small percentage. The literature (prior to 1951) reveals only 31 reported cases; while usually metastatic, a few were considered primary when another site could not be found. In none of the cases reported was the diagnosis suspected preoperatively.[2]

This report describes a case where several factors were considered of unusual interest, namely, the long interval between the removal of the original melanoma and the disclosure of two metastatic tumors in the jejunum where a double intussusception had occurred.

Case Report

History: J.F.B., a white male, 43 years of age, was admitted to the Medical Service of the Veterans Administration Hospital, Lebanon, Pennsylvania, on December 19, 1953, complaining of periodic abdominal cramps, nausea, occasional vomiting, constipation, abdominal distention, and flatulence of about two months duration. Past history revealed that in 1943 a "mole" was discovered on the anterior surface of his right thigh. This was fulgurated in January, 1944. While overseas in the Army in October, 1944, a mass of lymph nodes was removed from the right inguinal region. The diagnosis of melano-sarcoma was made by the Army Institute of Pathology. In June, 1945, at the Walter Reed Hospital, a radical resection of the aortic nodes as well as the inguinal nodes was done. The pathology report was "hyperplasia, no specific evidence of tumor."

Examination: The patient is a well developed white male adult. Findings are limited to the abdomen and right inguinal region. There is an incisional scar from the right lumbar area to the junction of the middle and upper portion of the right thigh. The scar is non-adherent and non-tender.



Fig. 1.

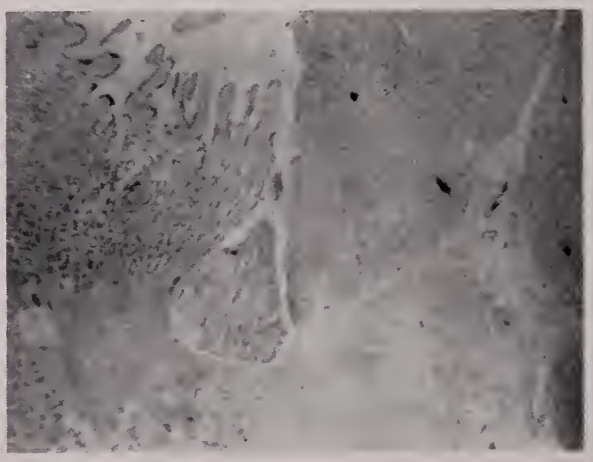


Fig. 2.

There was no definite localized tenderness; no masses were palpable. Peristalsis was slightly hyperactive at times. Some lymphedema of the right leg was present. Rectal examination was negative.

MAURICE A. MICHAEL, M.D., *Attending Surgeon, Obici Memorial Hospital; formerly Chief, Surgical Service, Veterans Administration Hospital, Lebanon, Pennsylvania.*

Received for publication, October 15, 1954.

Laboratory Data: Serology negative. RBC 4,250,000. Hgb. 11.95 WBC 5,500. Cephalin flocculation 24 hours 2 plus, 48 hours 3 plus. CO_2 64 vol%. Blood chlorides 522 mgs.%. X-ray of gall bladder showed it to be abnormally functioning. Barium enema: "There is no evidence of organic disease of large bowel or terminal ileum. There are two short lengths of small intestine partially distended in the upper quadrant. There is a disordered motor function of jejunum and ileum believed to be secondary to multiple adhesions producing incomplete obstruction."

The gastroenterologist thought that the partial obstruction was due to recurrence of the malignancy. Patient was seen by the Tumor Board and exploration recommended.

Course: He was transferred to the Surgical Service on January 8, 1953, and after preparation with intravenous glucose and saline, vitamins, and the introduction of a Miller Abbott tube, a laparotomy was performed January 13, 1953.

Operation: Under spinal anesthesia and through a transverse incision above the umbilicus, the abdomen was explored. A markedly dilated small intestine, apparently jejunum, was found and, following this loop, one was led to an area of small bowel about 8″ in length that was intussuscepted. By palpation and gentle traction the intussusception was freed only to disclose a smaller intussusception, in which a definite tumor formation could be felt. Due to the friability of the serosa and the presence of tumor, a resection of about 8″ of intestine including the tumor and intussuscepted intestine was done. An end to end anastomosis was made. Further exploration revealed no other tumors but several enlarged mesenteric lymph nodes were found and one was removed for biopsy.

An uneventful course followed. The Miller Abbott tube was removed on the second postoperative day, at which time the patient was able to take oral nutrition and was passing flatus. Sutures were removed on the eighth day. The patient was discharged in good condition on February 3, 1953. He reported for follow-up gastro-intestinal X-ray on May 1, 1953. He had been in good health, eating well with no recurrence of previous attacks. Gastro-intestinal X-ray showed normal function of the small intestine.

Pathological Report: Gross: (1) Mesenteric lymph node was 0.8 cm. in greatest diameter. Cut surface was not remarkable. (2) Unopened section of small intestine, measured 15 cm. in length. The proximal portion, after being opened, showed a circumference of 11 cm., the distal portion 6 cm. The wall appeared somewhat congested and the submucosa edematous, particularly at the proximal end. There was a dimpled depression at one point beneath which a tumor was felt within the lumen, attached to the bowel wall. Upon opening the bowel two masses were seen arising from bowel wall with an interval



Fig. 3.

of unaltered bowel 2 cm. in length between them. The larger mass measured 4.5x3x1.5 cm., the small 1.5x1.5x1.5 cm. They both arose from a broad base from the wall of the bowel. The tumors showed a low lobular surface with superficial necrosis. The cut surface was dense, and of a pinkish, yellow-gray appearance. (Fig. 1)

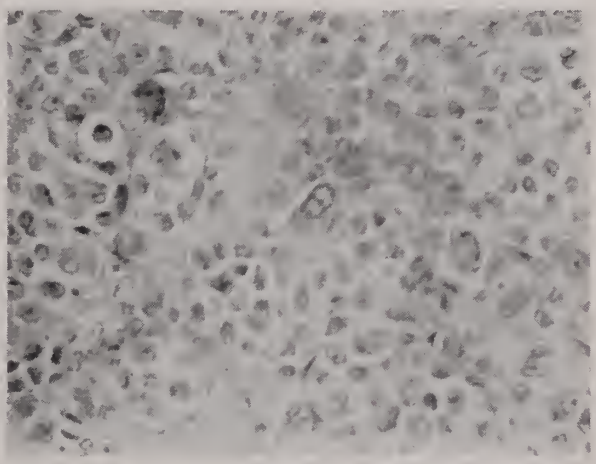


Fig. 4.

Microscopic: (1) Lymph node, inflammatory reaction. (2) Tumors show closely packed cords and masses of polyhedral cells with large vesticular nuclei and scanty cytoplasm most resembling nevus cells. There is little nuclear or cystoplasmic variation, although an occasional mitotic figure can be found. A few cells containing blackish-brown pig-

ment which is interpreted as melanin. At their margins in the submucous layer of the bowel there is some invasion of adjacent normal tissue. (Fig. 2)

Diagnosis: Melanoma, metastatic, of small intestine; intussusception due to above. Lymph node hyperplasia, inflammatory. (Figs. 3 and 4)

Discussion and Conclusion

An excellent review of intussusception in adults, as well as interesting case reports, can be found in an article by Brayton and Norris.[7] Intestinal melanoma is much more common in males than in females, especially white males.[6] In one report the ratio was 13 to 3.[2] While abdominal symptoms are not distinctive, signs of incomplete obstruction, such as distention, nausea, constipation alternating with diarrhea, and flatulence are common to all. In 31 cases reported in the literature, intussusception occurred in 12; it might have been present in an additional one reported by Chitwood and Guarino.[6] Seven cases were operated early in the disease, of which 4 died shortly after surgery.[2] X-ray studies, while suggestive of pathology of obstruction, rarely gave a definitive diagnosis. Some distention of the lumen and distortion of the mucosa was present.

The behaviour and dissemination of melanoma is unpredictable. An "insignificant mole" may cause wide spread fatal metastases, or may metastasize years after removal, or rarely a spontaneous recurrence may occur. The spread may be by lymphatics or by blood stream, and in the case of the latter may develop in every organ of the body. Cerebral and intestinal metastases have occurred from unsuspected primary growths. For further description and discussion of melanoma Willius[3] is recommended.

The only basis for the conclusion that a melanotic tumor of the bowel is a primary one is the failure to find a source elsewhere[6]. The case against the primary origin of gastro-intestinal melanoma can be found in a report by Herbut and Manges[4].

In conclusion, with the history of a mole present, or removed at any time in the past, a clinical picture of intestinal obstruction should make one suspect a metastatic bowel tumor as the causative factor.

Addendum: Since my last examination of the patient it has been reported to me that he developed multiple subcutaneous nodules the latter part of 1953. The biopsy of one of these nodules was reported as malignant melanoma metastasis. This no doubt represents wide spread vascular metastases and a fatal termination may have already occurred.

Bibliography

1. Bancroft, F. W., and Wade, P. A.: Surgical Treatment of Abdomen. J. B. Lippincott, 1947.
2. Richman, A., and Lipsay, J. J.: Melanomas of the Small Intestine and Stomach. J. Mt. Sinai Hospital, 17: 907, 1950-51.
3. Willius, R. A.: Pathology of Tumours. C. V. Mosby Co., 1948.
4. Herbut, P. A., and Manges, W. E.: Melanoma of Small Intestine. Arch. Path., 39: 22, 1945.
5. Galgona, A. R.: Long Survival in a Malignant Melanoma. J.A.M.A., 152: 518, June, 1953.
6. Chitwood, Ed. M., and Guarino, G. B.: Primary Melanoma of the Ileum. Va. Med. Monthly, 81: 6, 259-60, June, 1954.
7. Brayton, D., and Norris, W. J.: Intussusception in Adults. Am. J. Surg., 88, 1, 32-43, July, 1954.

Tips to Teens

How to grow up gracefully is the story dramatized in AMA's newest radio transcription series prepared especially for use of local medical societies. Dealing with the health and emotional problems of modern teenagers, "16—Growing Up" covers such things as the young person's place in the family, getting started in the world, good and bad gangs, skin problems and money matters.

An interesting sidelight is the fact that Jane Webb, Hollywood actress who plays the part of the mother, was a child star on AMA health programs 15 years ago. Now a young mother herself, she made a special trip to New York to do this AMA show.

This 13-program series is available through the Bureau of Health Education.

The Medical Society of Virginia . . . .

American Medical Education Foundation

The fourth annual meeting of the state chairmen of the American Medical Education Foundation was held at the Sheraton Hotel in Chicago, January 23, 1955, with Dr. Edwin S. Hamilton, member of the board of directors of the Foundation and trustee of the A.M.A., presiding. He welcomed the group to the meeting and extended congratulations to the Woman's Auxiliary of the A.M.A. for their aid to the A.M.E.F. in the past year. The presiding chairman further advised the members that his own State, Illinois, had successfully effected a $20.00 dues increase, but that this had met with considerable opposition from some of the county societies. He felt if some such plan was not followed by the other states that it would be necessary for the A.M.A. to raise their annual dues to meet the needs for medical education. He also stated that unless the physicians themselves would demonstrate these funds could be raised, the federal government would step in to fulfill this need.

Dr. Walter B. Martin, member of the Board of Directors of the A.M.E.F. and President of the American Medical Association, talked on the matter of continuing our high standards in medical education and the cost of present day medical education. In support of the A.M.E.F., he stated that physicians know the importance of good medical education, and they are the ones most responsible for it; therefore, the A.M.A. must take more responsibility than formerly. He said it is proper that physicians should pay their debt to society since a sizable portion of their education was financed with outside assistance.

Dr. Hamilton then introduced Mrs. Frank Gastineau, national chairman of the American Medical Education Foundation Committee, Woman's Auxiliary to the A.M.A. Mrs. Gastineau reported the Woman's Auxiliary had raised approximately $50,000 in 1954 for the A.M.E.F. and many various methods had been used to raise this money which ranged from selling crocheted dish rags to chances on mink stoles. However, Mrs. Gastineau felt that the personal appeal appeared to be the most effective.

Mrs. George Turner, president of the Woman's Auxiliary to the American Medical Association, was then introduced. She briefly discussed the history and the purpose of the Woman's Auxiliary and stated she hoped that the Woman's Auxiliary would contribute $100,000 to the A.M.E.F. in 1955, doubling the amount given in 1954.

Dr. Hamilton then introduced Dr. Charles Ruggeri, President of the Utah State Medical Association, who said that in 1953 the House of Delegates of the Utah State Medical Association voted to assess each member a dues increase of $20.00 to meet the present increase for medical schools. In the opinion of physicians in Utah, freedom must be preserved to practice medicine without compulsion and unless physicians provide leadership to aid medical education voluntarily, the schools will be forced to accept a government subsidy. He also stated that many of their physicians contributed to the A.M.E.F. in addition to their state society assessment.

Dr. D. W. Heusinkveld, President-elect of the Ohio State Medical Association, told the meeting that the Ohio State Medical Association advised the physicians to give through their alumni funds or through the A.M.E.F. He reported that each member receives a direct mail appeal from the society president with an A.M.E.F. postpaid envelope enclosed, and the local chairmen are asked to follow up with personal solicitations. It seems that this method has worked fairly successfully in the State of Ohio.

Dr. Edward L. Turner, Secretary-Treasurer of the Foundation and Secretary of the Council on Medical Education and Hospitals of the A.M.A. gave some very interesting facts and figures on medical education.

At the afternoon session the first speaker was Mr. James G. Burch, Director of Public Relations, Connecticut State Medical Society. Mr. Burch reported that the Connecticut program which was started in October 1951 placed the responsibility for planning and conducting the campaign for the A.M.E.F. upon the Public Relations Committee. He outlined the method used by the Committee: (1) Each county Public Relations Chairman was asked to divide his county into campaign districts and to interest physicians to serve as volunteer leaders in each district; (2) As soon as the district leader had been appointed, he was sent a kit including contribution cards, background information, etc. for team members. Each district leader was required to appoint team members to personally contact an average of 10 physicians in his district; (3) Team members received a kit containing factual information and they contacted phy-

sicians listed on contribution cards supplied by their district leaders.

Mr. Hiram W. Jones, Executive Secretary of the Foundation, further discussed fund raising methods and ideas. After this a question and answer period was held.

After attending this meeting and listening to the discussion on the various methods used in raising money for the A.M.E.F., all of which seemed to have some merit. it seems to me that the problem boils down to educating the physicians as to what the A.M.E.F. stands for and what it could do to aid future medical education. I believe that in our state a combination of these methods has to be worked out according to the population. However when possible, personal solicitation would certainly seem advisable, but in many instances not practical. The combination of appeal by mail and personal solicitation whenever possible seems to be the combination that we will have to try to work out at the present. It would seem that the increase in medical dues to raise this money will have to be delayed until physicians learn more about the needs of the A.M.E.F. I also feel that the Woman's Auxiliary can not only help in their own organizations in raising money, but may also help to sell the idea of contributing to some of their hu bands.

RICHARD A. MICHAUX, M.D., *Chairman*

Meet Your Colleagues Along the Boardwalk!

Physicians attending the AMA's 104th Annual Meeting June 6-10 in Atlantic City may not have much time for casual strolling along the boardwalk, but they'll find ample opportunity for catching up on the latest discoveries in medicine. AMA has lined up nearly five full days of lectures, scientific and technical exhibits and color television and motion picture presentations to give you a good "short course" in postgraduate medical education. Between 13,000 and 16,000 physicians are expected to attend the convention which will center its activities in the Atlantic City Auditorium and adjacent hotels. Headquarters will be at the Traymore hotel where the House of Delegates will convene.

Outstanding scientific features include: A report on the Salk polio vaccine trials at a joint meeting of the sections on pediatrics and preventive medicine; a general discussion of resuscitation of the newborn for the sections on anesthesiology, diseases of the chest, general practice, obstetrics and pediatrics; exhibit-symposiums on rheumatism and diabetes; fracture and fresh pathology exhibits, and a new "Queries and Minor Notes" feature in which consultants from all branches of medicine will be on hand in convention hall to answer physicians' questions concerning specific cases. In addition, the Air Force will demonstrate its "flying infirmary" on the beach in front of the Auditorium throughout the week.

More than 325 scientific exhibits and 350 technical exhibits will be on display. The color television program will present interesting surgical and clinical demonstrations piped directly into the Auditorium from Philadelphia hospitals.

Special note to all physicians: The Auditorium will be open exclusively for physicians from 8:30 a.m. to 12 noon on Wednesday so that you may move more freely among the exhibits and have more time for questioning exhibitors.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Poliomyelitis Vaccine Plans, 1955

It is expected that the report of Dr. Thomas Francis, Jr., Director of the Poliomyelitis Vaccine Evaluation Center, Ann Arbor, Michigan, will be submitted to the National Foundation For Infantile Paralysis, on or about April 1. Dr. Francis and his group are now carefully checking the records of 1,830,000 school children; 45,150 of these are Virginians who participated in the nation-wide field trials last year and his report will show whether the vaccine will be recommended for use in preventing the disease.

If it proves to be satisfactory and is licensed by the National Institutes of Health of the Public Health Service, the vaccine will be offered immediately to school children in the first and second grades throughout the nation and to school children in the current third and fourth grades who participated in the field trials last year but did not receive the vaccine. Alaska and Hawaii are included with continental United States. Last October the National Foundation For Infantile Paralysis contracted for nine million doses of the vaccine, and on receipt of the notice of approval and licensing, will distribute it to State Health Departments for use as outlined, without charge for the product. State and local health officials will administer the program.

In addition, the manufacturers have been producing additional supplies which will be available for purchase, to be given by physicians to others who will not be in the groups designated by the National Foundation. If the vaccine is not licensed, it will not be used.

In Virginia, figures as to actual enrollments in the first two grades in public, private and parochial schools have already been sent to the National Foundation For Infantile Paralysis. The Poliomyelitis Committee of The Medical Society of Virginia has given its approval to the administration of the vaccine provided it is licensed. A planning committee has been set up, composed of representatives from the Virginia State Health Department, the office of the Department of Public Education, the National Foundation For Infantile Paralysis, and The Medical Society of Virginia. County and city health directors, superintendents of schools, and chapter representatives of the National Foundation will meet on March 14, at the Hotel Roanoke, Roanoke, to discuss plans for administering the vaccine throughout the state, if and when it is available. For the first hour each group will separately study the manual. A joint meeting will follow to discuss plans for all groups working together and to provide for smooth operation in administering the vaccine.

All communities must make ready ahead of time for this vaccine program so that if and when we are told that the vaccine is acceptable, the "go" signal can be given to immunize the groups before the poliomyelitis season begins. Parental consent must be obtained for each child who receives the vaccine. The projected vaccine program will not be another test. It will be the first use of a newly established preventive measure given to groups in which poliomyelitis appears in largest numbers.

Monthly Report of Bureau of Communicable Disease Control

	Feb. 1955	Feb. 1954	Jan.-Feb. 1955	Jan.-Feb. 1954
Brucellosis	3	4	3	4
Diphtheria	1	10	3	17
Infectious Hepatitis	186	492	348	998
Measles	413	1906	766	2875
Meningococcal Infections	9	10	15	24
Poliomyelitis	3	4	3	7
Rocky Mt. Spotted Fever	1	0	2	0
Streptococcal Infections	1114	504	1869	1114
Tularemia	3	6	4	17
Typhoid Fever	7	5	10	8
Rabies (In Animals)	49	48	110	78

Medico-Legal Notes . . . .

Malpractice and the Emotionally Disturbed Patients.

A large part of any doctor's practice consists of people with emotional illness. This includes not only the frank neuroses, psychoses and personality disorders, but their much more numerous cousins—patients with physical disorders and physical complaints rooted in emotional conflict. It includes, indeed, the whole spectrum of disorders of function and tonicity that are generally labelled "psychosomatic".

Through the huge literature of emotional and psychosomatic medicine, one finds little reference to one aspect of this practice that may prove a trap for the unwary practitioner—that is the possibilities of becoming involved in malpractice action. This arises because of five factors peculiar to emotionally disturbed patients:

(1) Many of them are litiginous by temperament. While most emotionally sick patients are not aggressively litiginous, the reverse is not true. The fact is that nearly all chronic litigants are emotionally disturbed.

(2) Emotionally disturbed patients are more likely to confuse fact with fantasy than are emotionally stable patients. A doctor who lances a boil and gives the female patient a sedative first may be shocked to find that she later has fantasied a seduction or even an assault. The sedative combined with the doctor's manipulation of her face or body combined with, one knows not what unconscious sexual fantasies, all mixed together and produced this picture in the mind of the disturbed patient.

(3) If the patient is mentally ill, the doctor's action may result in the patient's losing his liberty (being committed to a state hospital), losing control of his affairs (being declared incompetent) and the like. This obviously invites malpractice charges since from the patient's viewpoint this action, initated by the doctor, may be unjustified.

(4) What the doctor has to say about the mental or emotonal patient may lead to a charge of libel or a civil suit based on slander or defamation. For example, the doctor may have to say that the patient is an alcoholic, a homosexual, a neurotic, a drug addict, incompetent, and so on. Resenting such a classification, the patient may initiate legal action.

(5) Failure to obtain provable consent to an operation or other procedure has been a malpractice booby-trap to more than one physician. Since in this area, the doctor deals with persons of questionable competency, the problem is especially delicate here. The patient may consent to the procedure, but if he is incompetent, this consent is legally worthless, and the doctor may be liable if he failed to obtain the consent of the guardian or a responsible relative.

A physician can be personally sued on a malpractice matter even if he is employed by a city, state or federal government, and is acting in accordance with his official duties. It would be wise for all doctors to carry malpractice insurance even if they are employed full-time by government agencies or institutions.

A physician who uses a novel or experimental procedure does so at his own (financial) risk. The fact that the patient consents or that he waives the right to sue does not offer any protection if the doctor is negligent. A patient cannot waive the doctor's duty to avoid negligence.

Even though a patient is being treated gratuitously —as in a free clinic—he retains his right to sue the doctor if he thinks the practitioner is negligent.

Contributed by HENRY A. DAVIDSON, M.D., *Assistant Superintendent of the Essex County Hospital at Cedar Grove, New Jersey. Dr. Davidson is also an instructor in legal medicine at the Medical College of Virginia and the author of the standard "Forensic Psychiatry" (Ronald Press, New York 1953)*

Annual Meeting—The Medical Society of Virginia

October 16, 17, 18 and 19, 1955

Richmond, Virginia

Notes On Pulmonary Tuberculosis . . . .

Modern Therapy IX
Factors Which Influence Termination of Treatment (B)

Allusion has been made repeatedly to practical advantages which could accrue to the general practitioner should he accept, as a working hypothesis, the concept of sub-clinically active pulmonary tuberculosis as a distinct entity or phase of tuberculosis which *invariably* must be *assumed to follow* in the wake of clinically demonstrable active disease, and for which specific formal treatment should equally invariably be prescribed. In other words, from this point of view, the disease process is *presumably* active and is treated as such.

Upon completion of this treatment the patient's disease can be re-classified as "apparently inactive". The disease process is now *presumably* inactive, and as such, is *not* recommended for treatment. (See September and October issues, Virginia Medical Monthly).

It has proven to be not too difficult for most persons to comprehend why *all patients who recover from clinically active tuberculosis must necessarily* pass through *each* of these successive intermediate stages—a working hypothesis that is not merely easy to understand, but one which is *compatible with everything that is known about tuberculous pathology.*

* * * * * *

Brief reference should probably be made at this point to an opposing theory, currently espoused by some physicians. This theory holds that while some "inactive" cases do *not* need treatment, there are others *that do.* Since an *identical* term in used to describe both, one instinctively wonders *which* of these two fundamentally divergent groups is the *more,* or the *less,* inactive, with reference to the other.

If *any* case of pulmonary tuberculosis is curable (clinically), and the sponsors of this classification concede that many are, then it would seem that the word "cure" might be substituted, without serious objection upon their part, for the term "inactive", *when* the patient has been living "under normal conditions of life", for an agreed upon period, *without treatment.*

But when one then proceeds, with seemingly sound logic, to attempt to substitute this agreed upon synonym of "cure", for "inactive", when application of this latter term is extended to include cases *still under treatment,* he is confronted with an impasse—which is not resolved by recourse to the phrase "cured—but not cured". While the latter would seem to be aptly descriptive of the status "Inactive—in need of treatment", it is, unfortunately, no less difficult for the average person to understand.

Most laymen have no difficulty in accepting the validity of elementary distinctions commonly made between degrees of intensity of clinical patterns exhibited by patients with *active* tuberculous disease. And as long as these lesions remain unhealed it is taken for granted that their respective activity status will be subject to fluctuation—may change from "*more* active" to "*less* active"—or vice versa—all of which is easy to understand.

Even the differentiation between "clinical" and "sub-clinically" active tuberculosis has not proven to be too hard for public health workers and patients to grasp, and to accept in terms of need for *additional* treatment for the latter. But the distinction between cases which are "cured" (*not* in need of treatment), as opposed to those which are "cured—but not cured" (*in* need of treatment) has proven to be much more difficult and often impossible to convey.

Indeed, this is a chief reason why this widely publicized but apparently wholly impracticable classification of activity status is *not* recommended for use by public health workers affiliated with the Division of Local Health Services in the Virginia State Health Department.

* * * * * *

Should the general practitioner in Virginia, in turn, care to accept as a working hypothesis the concept of sub-clinically active pulmonary tuberculosis, he must accept responsibility for its treatment, when dealing with tuberculous individuals in need of treatment and who are curable. Since the course of the disease, during its sub-clinical phase, cannot be followed objectively, intelligent direction of therapy must necessarily depend, in each individual case, upon knowledge of antecedent history. The attending physician *must* know (1) *How sick* the patient has been, (2) *How long* he has been sick, (3) *How well he responded to treatment,* during the clinical phase (See March 1955 issue, Virginia Medical Monthly).

Inasmuch as treatment prescribed during the sub-clinically active phase, particularly as applied to systemic rest, will be directly related to these three factors, which are themselves extremely variable,

daily rest schedules as well as total treatment spans, as measured in terms of many months' or more, prescribed for the sub-clinical phase, will be correspondingly divergent and *individualized*. For example, patients may embark upon treatment regimes which range from 24 hours flat in bed per diem, to those which involve comparatively little deviation from their pre-illness life patterns.

Uninterrupted application of whatever regime is in force at the time of disappearance of all clinical evidence of active disease stems from the elementary fact that one is still treating the *same* patient for the *same* disease. If the patient was unable to erase tangible evidence of active tuberculosis on anything short of 24 hours per diem flat bed rest, there is no logical basis for assuming that he can succeed any better in influencing the course of his disease during the sub-clinical phase. At the other extreme would be those who improve exceptionally well upon progressively liberalized programs. They would begin treatment for sub-clinical disease upon the rest schedule most recently prescribed (however liberal), that had been in effect long enough to have been credited, in whole or in part, for final elimination of the last vestiges of clinical disease.

In the complete absence of criteria during the sub-clinical phase, by which to progressively modify the rest regime, it is suggested that once started the patient continue without modification upon this self same schedule *throughout the total calculated sub-clinically active phase*. Although a conservative approach of this character undoubtedly would result in some patients taking more rest than they might actually need during the latter portion of the sub-clinical phase, it would prevent others from *prematurely* liberalizing their programs, which of the two is a *much* more costly mistake, and one *which has too often been made*—in the past.

Naturally throughout the sub-clinical phase repeated x-ray, laboratory, and other examinations should be performed to make sure the patient has not clinically reactivated (in the absence of symptoms).

Upon completion of treatment, and depending upon the rigorousness of the systemic rest regime in force during the sub-clinical phase, varying periods must be allowed for gradual restoration of the patient's physiology to normal. During this time the patient would not be regarded as taking treatment *for tuberculosis* at all. For this reason there would be *comparatively* little time expended, in most instances, in returning the patient to his pre-illness level of living, at which time he would be reclassifiable as "apparently inactive". Others may qualify in every other way for an apparently inactive status but may be unable to return fully to their pre-illness level of living. The latter would be regarded as partially disabled, but nevertheless "apparently inactive" (See March 1955 issue, Virginia Medical Monthly).

The period between the time specific treatment for sub-clinical tuberculosis is discontinued altogether, and the time when the patient has been completely restored to his pre-illness or prescribed post-illness level of living is the *only* period in tuberculosis where the patient can *properly* be described as "convalescing", and even here he is recuperating primarily from the enervating effects (when significant) of *treatment* taken during the sub-clinical phase.

The all too common practice of referring to a patient as "convalescing", *i.e.*, recuperating from the *effects* of tuberculosis, at the same time he is taking treatment *for* tuberculosis, understandably has been and is a source of *grave* confusion to many patients, reflected in flagging interest and cooperation during the final crucial months of "cure-taking".

Needless to say, for it is a matter of common knowledge, not all cases of pulmonary tuberculosis are or have been treated along the lines suggested. In many, the concept of sub-clinical tuberculosis is either ignored or inadequately appraised, with treatment inappropriately quantitated. Even in the absence of criteria, rest regimes are often liberalized progressively during the post-clinical period—under the guise of "exercise tests". If the patient passes each test he will be restored to normal living sooner. If he doesn't pass—well, it's tough to have a disease in which "relapse" is accepted by many as a "chief characteristic".

One sometimes wonders how long it would take for established fires to be classified as "chronic recurring phenomena"—if firemen tried to put them out the way many people have tried to cure tuberculosis. The trained fireman knows that after the last visible flame (clinically tangible disease) has disappeared there is "smouldering" to deal with—which can't be seen—but which he knows is there *because he knows fires!* He is painstakingly unstinting (wasteful—to the bystander) of water during this crucial period—for he does not want to come back later to put the fire out all over again. The analogy is not inapropos.

The Factor of Drug Therapy

Extensive research is under way to evaluate drug therapy in tuberculosis. To date most authorities assign an auxillary role to these important treatment

aids. They are not bacteriocidal or otherwise completely curative of themselves, so basic treatment by systemic rest in quantity sufficient must still be prescribed and taken to assure success.

It is true, in some instances, the *amount* of systemic rest required may be but 5% of what might have been needed without drugs, whereupon the patient is tempted to be satisfied with 3%. For every case years ago who could "control" his disease for variable periods because of an above average natural resistance, there are hundreds today with average or below average resistance who can "control" their disease for as yet undetermined periods virtually by the use of drugs alone, with or without surgery.

Just as people, even with curable disease, characteristically *tire* of taking treatment in terms of even slight restrictions imposed upon normal live patterns over prolonged periods—people can be depended upon to *tire* of taking drugs for "control" after variable periods of reasonably normal living.

It must be clear that tuberculosis cannot be eradicated as a serious public health problem by unscientific, not to say "indiscriminate" use of anti-tuberculosis drugs (and surgery). On the contrary, frightening potential reservoirs of highly resistant organisms could be built up—to wreck eventual havoc upon their hosts and upon their contacts.

The Virginia State Health Department does not believe such a catastrophe will occur, because it is convinced that physicians generally can be encouraged successfully to *treat tuberculosis*—not just dispense drugs for relief of clinical disease—and that patients will willingly accept prescribed treatment when they understand.

Earlier suggestions (above) for treatment of sub-clinical tuberculosis did not specifically take into account the possible concurrent use of drug therapy or reversible collapse therapy—on the theory that to treat tuberculosis effectively with modern treatment aids one must first know how to treat the disease successfully *without* the latter-day adjuvants.

It is generally felt by the Virginia State Health Department that as a rule of thumb, systemic rest for sub-clinically active tuebrculosis, should be continued well past the discontination of drug therapy. This would apply as well to reversible collapse.

Naturally when drugs are administered with apparent effect during the clinical phase of disease, their influence will be reflected in a shortening of the clinical course, which latter, in turn, is one of the three major factors suggested for estimating total length of time of the ensuing sub-clinical phase—in terms of application of systemic rest. It is further suggested that the influence of drugs in determining the duration of the sub-clinical phase be limited to this. The same could be said for all other forms of collateral therapy.

By utilization of the *relatively* simple formula described, for discontinuation of treatment *without* drugs, the *totally* bewildering question as to when drug therapy should be discontinued without reference to such a formula is dispelled.

However, the last word has not been written on drug therapy in tuberculosis—new drugs are constantly being discovered—and only time will establish the ultimate role of this form of treatment.

More Readers for "Today's Health"

Hats off to woman's auxiliaries coming up with fresh ideas for bringing "Today's Health" magazine to more and more readers. Two auxiliary projects recently were brought to AMA's attention. At the suggestion of the Sevier-Polk counties auxiliary, the Arkansas Medical Society has placed copies of the magazine in 100 bookmobiles throughout the state. Also prompted by its auxiliary, the Nevada State Medical Association has ordered subscriptions for every secondary school, college and university library in the state.

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

After-Care Clinics

In September 1954, Eastern State Hospital strengthened its After-Care Program by setting up Clinics. Such clinics are now in operation in Richmond, Newport News and Norfolk, and a fourth is in the planning stage for Portsmouth.

The need of After-Care for mental patients when they first leave the hospital, and during the early readjustment which follows, was pointed out by Dr. Joseph E. Barrett in his 1943-44 hospital report.

Looking back, we find that over a century ago means were in use in different countries to accomplish this end. The "Guild of Friends of the Infirm in Mind" was an early expression of community responsibility in England. Dr. Jean Pierre Falert provided follow-up care in France through founding the Societe of Patronage when he was studying the periodicity of certain types of mental illness and the Asylum in Eberbach, Germany, followed the same procedure in the early nineteenth century.

Today's method of follow-up was being tried by Lady Almoners in London hospitals as early as 1902 in their effort to assist patients to make satisfactory adjustments on returning to their homes. Other means of follow-up have developed in this country. Always, however, we find the social worker employed as observer, accompanied by careful recording of the interpersonal and social relationships of the patient as they mirror his adjustment to his family and his community and the presentation of these observations to the psychiatrist.

New York State's eighteen mental hospitals operate thirty six After-Care Clinics for the rehabilitation of convalescents or discharged patients and thirty three others serve as After-Care and Community Clinics. In New Jersey an experimental After-Care program was set up in the early forties. In 1948, three After-Care Clinics were opened by the Trenton State Hospital under the direction of the Clinical Director. These clinics were staffed by trained psychiatric social workers with psychiatrists available for consultation. They proved so successful that the program was expanded to cover the entire outpatient population of that hospital.

The chief emphasis has been placed upon exploring the needs of the patient and helping him to work out suitable orientation plans in the light of these needs. Emotional, interpersonal and environmental factors must be recognized by the psychiatric social worker as she contributes to the understanding of the patient's problems and his life situations.

At Eastern State Hospital the after-care program is carried out in the following manner:

During the initial interview the social worker establishes a relationship with the family which encourages its members to maintain a positive attitude toward the patient during his treatment period in the hospital. This relationship helps the family to accept the patient's hospitalization with understanding. As the patient's condition improves and a trial visit is contemplated, his psychiatrist refers the case to the Social Service Department whose responsibility it is to assist him in planning to leave the hospital. Future plans for the patient are formulated in conferences between the patient, his family, the social worker and the psychiatrist. When the need for additional help is indicated, Vocational Rehabilitation and others are invited to participate in these conferences. The patient's first clinic appointment should be made while he is still in the hospital preparing for furlough. During his pre-release interviews the clinic's purpose is explained to him and to his relatives.

After-Care Clinics can be set up under one of three plans of operation:

1. The Clinic may serve as an observation or reporting center.

2. In addition to reporting to the psychiatrist, the social worker may assist the patient further by supportive therapy in helping him rebuild his interpersonal relationships and in modifying the environmental factors as the need is indicated.

3. Following the above, treatment may be provided in the person of an attending psychiatrist.

Article prepared by MRS. KATHRYN R. GERMANY, *Director, Social Service Department, Eastern State Hospital, Williamsburg.*

Experience has proven that the interest and help offered in the After-Care Clinics constitute a positive factor in the patient's continued progress as he returns to the community. It is generally recognized that, in many cases, relatives may need help in understanding, accepting and in changing certain attitudes toward the patient. When the patient, his relatives and the social worker, under the direction of the consultant psychiatrist work in harmony, much progress can be achieved. Frequently the social worker finds it advisable to contact and enlist the help of other community resources in behalf of the patient. This collaboration in working with the patient proves of value for all concerned.

As a result, members of the community are gradually losing their fear and rejection of those who have been mentally ill. Eastern State Hospital visualizes a program of After-Care for every patient during his furlough period. In order to achieve this the Psychiatric and Social Service Staffs must be adequate to keep pace with the new and constructive trends in caring for those we aim to serve.

SUMMARY

1. The After-Care Clinics of Eastern State Hospital are being organized primarily to help the patient and his family with any problems that may arise following release from the hospital.

2. This method of After-Care conserves the social worker's time and transportation costs and permits her to serve a larger number of patients and their families. When indicated, visits to the home may be made. However, it is believed that the act of coming to the Clinic center is, in itself, of therapeutic value to the patient.

3. This kind of supervision enables the Medical Staff to release patients at an earlier period in their convalescence and so conserves hospital beds for the use of the more acutely ill patients.

Helps Diagnose Measles.

A simple laboratory test has been found helpful in diagnosing measles before the tell-tale rash appears. Drs. Victor Tompkins and John C. Macaulay, Albany, N. Y., of the New York state health department and Albany Medical College, described the test in the February 26th Journal of the American Medical Association.

They found that patients in the stage of measles before rash appears develop an unusual type of cell in the membranes of the nose and throat. Samples of such cells were found regularly in 10 patients from five days before rash to the day it appeared. The method of taking a cell sample and examining it is simple. While the test has not been used enough to tell whether it will be reliable, their own experience has been "so encouraging" that they recommend it for other physicians.

AMA Announces '55 Radio Health Shows

Doctors of America again will plug better health on the air waves as the AMA's Bureau of Health Education announces its 1955 radio transcription plans. Three new program series will be developed for use of state and county medical societies over local radio stations.

With the cooperation of the Rocky Mountain Radio Council, AMA will make available about April 15 a special series of 13 medical "whodunits" entitled, "Dr. Tim Detective." This series tells the story of two youngsters who help the doctor solve interesting and mysterious medical cases. For example, one involves a criminal who betrays himself because of what he does not know about diabetes.

Another series to be released about June 15 will be based on AMA's week-day Chicago television program, "The Doctor Answers." Tapes will be made of 13 of these shows in which Elizabeth Hart (WBKB-TV women's commentator) asks pertinent health questions of Bureau staff doctors W. W. Bauer (director) and W. W. Bolton.

The final series—dealing with new developments in various medical specialties—will be completed about Sept. 15. Top-flight authorities in such fields as geriatrics, mental health, cancer, polio, arthritis and obstetrics will be featured.

Further details will be announced later.

Woman's Auxiliary....

President—Mrs. Maynard Emlaw, Richmond
President-Elect—Mrs. Mervin W. Glover, Arlington
Recording Secretary—Mrs. J. W. Carney, Newport News
Corresponding Secretary
Mrs. Levi W. Hulley, Jr., Richmond
Treasurer—Mrs. William C. Barr, Richmond
Publication Chairman—Mrs. Wm. S. Grizzard, Petersburg

Richmond.

February has been a busy month for the Richmond Auxiliary. On the 12th, honoring Doctors' Day, a dinner dance was held at the Commonwealth Club for members of the Academy of Medicine and their wives. It was a lovely party with the largest attendance on record. Valentine decorations were very attractive. Mrs. A. A. Houser, Jr., was general chairman, with Mrs. John Williams Powell, chairman of reservations.

The February meeting was held on the 18th, with Mrs. Thomas S. Chalkley as chairman of the day. Mr. Harold Prather, administrator of the Richmond Memorial Hospital, now under construction, told of the new and modern features the hospital will have and also of the problems facing its operation. Luncheon chairman was Mrs. James F. Blades and attractive George Washington decorations were arranged by Mrs. Leroy Smith.

Our members are very elated over the results of the tea at the Valentine Museum on February 25th. Each year we have a fund raising stunt for the benefit of Sheltering Arms Hospital. Tickets for the tea were sold for $1.00 and a mink stole was given as a door prize. The tea proved highly successful and Sheltering Arms is over $1800.00 richer. Mrs. Gilman Tyler was general chairman and Mrs. George H. Snead, ticket chairman.

Anne R. Snead
(Mrs. George H. Snead)

Wise.

This auxiliary met at the Colonial Hotel in Wise on February 9th, with Mrs. W. B. Barton, president, presiding. Annual reports of chairmen of the various committees was given. Volunteers signed up for the monthly session of the orthopedic clinic at the Health Center.

A discussion on a project of establishing a medical library was held. Medical books and journals would be provided on loan or as a gift by the doctors of the county, and members of the auxiliary would help in the Library.

Mrs. C. H. Henderson, Norton, was elected as the new president.

I. V. Bene
(Mrs. E. Bene)

Arlington.

The Arlington Auxiliary sponsored a Fashion Show Luncheon for the benefit of the Arlington Hospital on March 8th at the Washington Golf and Country Club. Fashions were presented by Lady Hamilton, Incorporated, of Arlington. Door prizes were donated by the county society, the auxiliary and individual members. Music was furnished by the "Musettes" of the Ashton Heights Woman's Club, who donated their check to the hospital.

All proceeds were applied to complete payment of the Doctor's Call Board donated to the hospital by the Auxiliary.

Mrs. Albert J. Orlosky was chairman of the event with Mrs. Henry L. Bastien as co-chairman. Mrs. L. G. Gant and Mrs. R. V. Mitchell also served on the committee.

To celebrate Doctor's Day, the auxiliary is planning a Covered Dish Supper for Sunday evening, April 3rd, at the Lyon Village Community House in Arlington. Mrs. T. A. McGavin is chairman of this committee.

The following members attended the Mid-Winter Board Meeting of the State Auxiliary, held in Richmond in March: Mrs. A. R. DiSario, President; Mrs. M. W. Glover, President-Elect of the State Auxiliary; Mrs. K. C. Latven, President-Elect of the local auxiliary; and Mrs. L. B. Martin, chairman of Research and Romance of Medicine for the state.

New addition to Arlington families are: Dr. and Mrs. Lloyd B. Burk, Jr., a girl—Sarah Jane—total 4 girls, 1 boy; Dr. and Mrs. Edmund P. Naccash, a boy—Edmund Peter, Jr.—total 2 girls, 1 boy; Dr. and Mrs. Louis Z. Fauteux, Jr., a girl—Jeannemarie—total 2 boys, 1 girl; Dr. and Mrs. Dan Feriozi, a girl—Kendall Seay—total 1 boy, 2 girls; Dr. and Mrs. C. J. Weimer, a girl—Anita Terese—total 1 girl, 3 boys; Dr. and Mrs. Archibald MacPherson,

a boy—Roderick Allen—total 3 girls, 2 boys; and Dr. and Mrs. Gerald J. Fisher, a girl—Claire Louise—total 1 girl, 1 boy.

Helen H. Water
(Mrs. James C. Water)

Petersburg.

The regular monthly meeting of the Petersburg Auxiliary was held at the Petersburg General Hospital on February 22nd. Mrs. Joseph H. McCormick, president, presided.

Mrs. Arthur E. Harvey, executive secretary of the Petersburg Tuberculosis Association, told of various treatments for tuberculosis and explained some phases of handling and financing these patients in Petersburg and Virginia.

The auxiliary-sponsored dinner dance was held at the Petersburg Country Club on February 26th. This affair was most successful and netted the auxiliary $643.00. This money is to be added to the fund for Future Nurses. Each year a deserving high school graduate will receive a $200.00 a year scholarship.

Dorothy Uzzman
(Mrs. John Uzzmann)

State Health Week.



Shelley Markham, Richmond student, works on a poster for State Health Week, which was March 21-27. Governor Thomas B. Stanley and Mrs. Maynard R. Emlaw, President of the State Auxiliary, look on. Photograph is courtesy of The Richmond Times Dispatch and the Richmond News Leader.

Krebiozen.

Defense of the underdog is so esteemed by Americans that it runs the risk of becoming dogmatic, governing all cases, regardless of merit.

Krebiozen may be a case in point. Its introduction to the public was launched on the premise that it would never be fairly received or tested. Ignoring the customary methods of quietly conducting clinical trials, the originators of this proposed cancer treatment persuaded a distingished scientist to go along with them in a widely-publicized and ballyhooed debut in the form of a hotel-ballroom Sales Promotion stunt and an expensive-appearing brochure with others to follow.

This was not the manner in which reliable and authentic compounds are given to the public to fight disease. Such wonderful drugs as the sulfa compounds, the antibiotics, the hormones, were quietly tried on thousands of cases before the public was informed of their usefulness as therapeutic agents.

Even so had Krebiozen been a worthwhile treatment for cancer by now its efficacy would be well known. It has been available to doctors for several years. It has had a series of tests, reported on by the American Medical Association and by a committee of the National Research Council and declared to be without merit as a therapeutic treatment for cancer.

Dr. Charles S. Cameron
Medical and Scientific Director
American Cancer Society, Inc.

President's Message . . . .

The University of Virginia Hospital

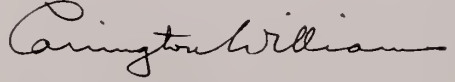
THE central portion of this great state institution was built more than fifty years ago. The wooden beams in its walls are well seasoned for flames, and its floors have absorbed the dirt and odors of age. Its wards have been overcrowded for years and patients have been placed in beds along its corridors. The more modern sections of the hospital have been built in piecemeal fashion as relatively small amounts of money could be collected from state funds and private philanthropy. Its kitchens are scattered in various wings, its expense of upkeep is high, its operation is necessarily inefficient. The excellent care of sick people is its greatest asset.

These facts have been placed before the last four sessions of the General Assembly. At first the surplus funds were considered untouchable. Then Governor Battle's influence diverted all available funds to public school construction. Finally the last Legislature, recognizing the deplorable state of the hospital, appropriated a sufficient sum to prepare plans for a building which it obviously expected to finance at its next session. This was expected to save time. A hospital is a complex building, its planning is difficult, it takes time to iron out difficulties and to arrive at satisfactory results.

There has been a friendly rivalry between our two medical schools and definite competition for state funds, yet at the last Legislature the President of the Medical College of Virginia testified that the reconstruction of the University of Virginia Hospital was the first medical need of the state.

The Legislature meets again in about nine months; these plans cannot be prepared in that time and estimates of the cost determined. It was clearly the purpose of the last Assembly, in appropriating $225,000.00, to have complete information so that it could act in its best judgment upon it. It is hard to understand why our chief executive has held these funds for nine months and still keeps them impounded.

This hospital is a state institution and not a University project, it should not be linked with a physics laboratory or a student union building, it involves the health and welfare of many citizens from all parts of the Commonwealth, and the members of The Medical Society of Virginia might well express to the Governor their desire to expedite this necessary improvement.



President

Editorial . . . .

Measuring the Tuberculosis Situation

THE rapidly declining rate of deaths caused by tuberculosis is evidence of the effectiveness of the public health campaign against this disease. For many years the number of new cases discovered (the incidence) increased in spite of the declining death rate. This has been attributed to the increased tempo of case finding. In public health parlance, the prevalence of a disease, as distinguished from the incidence, refers to the total number of cases known to exist on a given date. It is a cumulative figure. Authorities now express the opinion that the incidence of tuberculosis is declining but that the prevalence is still increasing. This, if true, is of great importance in planning the future public health program for control of tuberculosis. That advanced cases are saved, and that minimal cases are more quickly arrested, is a tribute to medical progress. Tuberculosis is, however, a chronic disease and one subject to relapses. If a greater number of cases exist, more care must be exercised to watch these patients and the problem of examining contacts is proportionately greater.

The communicability of tuberculosis qualifies it as a legitimate target for the traditional public health approach. Governmental funds spent for its control result in pyramiding returns. It is important that the momentum of the fight be continued until the prevalence of tuberculosis, as well as the death rate and incidence, has been substantially diminished.

The State Health Department should be commended for its foresight in making a current survey of existing cases of tuberculosis. This survey, due for completion this month, should aid the department in planning its field program and in determining the need for sanatorium beds. Other factors will, of course, also effect this need. The advice of clinicians must be sought in estimating the influence of improved treatment in decreasing the length of sanatorium stay and in estimating the potentialities of home care.

E.S.W.

Health Insurance, A Joint Endeavor

HEALTH insurance and the prepayment plans have been endorsed by the medical profession as a method by which the public can meet the rising cost of medical care. The number of persons with such coverage has increased rapidly. It is natural that difficulties should arise in as complicated an affair as this.

Some of the hazards insured against are insurable and some are not. To be insurable the contingency insured against should be undesirable, and its occurrence beyond the control of the person insured. Certain aspects of medical care meet these requirements. Usual care for unanticipated disease, or accidents may be readily paid for by insurance. Maternity care, routine dental work, periodic examinations or immunizations do not meet the requirements and to use the insurance mechanism to pay for these services tends to increase the total cost of medical care. Difficulties, also,

become apparent when the existence of insurance increases unduly the use of medical service or increases the charge for medical care. The fact that the prepayment idea has worked as well as it has is a great tribute to the cooperation rendered by the medical profession, as this group, more than any other, calls the signals.

The groups concerned have shown recently additional evidence of their desire to meet responsibilities in this field. The American Medical Association has had its Council on Medical Service for years, but in 1953 appointed a thirteen-man commission to study health insurance plans. The American Hospital Association gave large support to the Commission for the Study of Hospital Care. The report of the commission is now being published in five volumes, and makes lengthy references to health insurance. The insurance industry has had its Health Insurance Council for some time but during 1953 established a Joint Committee on Accident and Health Insurance for the purpose of studying and improving its product and is now operating through an elaborate set-up of task forces and sub-committees.

The National Association of Insurance Commissioners, which represent the governmental supervision of the insurance industry at the state level, has its committee on health insurance and on Blue Cross and Blue Shield plans. The State Insurance Departments have the duty of adequately representing the public.

On the federal level the Federal Communications Commission, during 1953, investigated the advertising of health insurance companies. The present administration is again presenting its plan of supporting health insurance through a reinsurance mechanism.

No attempt is made here to evaluate the effectiveness of these different endeavors, nor is any attempt to make suggestions except that there be consultations at the planning level rather than at the grievance or mediation stage. Cooperative efforts should result in a public service that is reasonable even though limited in scope. It is possible that the State Insurance Department could use advice from The Medical Society of Virginia. The administration in Washington sought freely the advice of the American Medical Association in establishing its health program. The primary supervision of health insurance is still vested in the State Government. It might be appropriate for The Medical Society of Virginia to take the initiative in offering aid.

E.S.W.

Society Proceedings . . . .

Virginia Pediatric Society.

At the annual meeting of this Society, held at Williamsburg, March 4-5, Dr. F. Read Hopkins, Lynchburg, was elected president, succeeding Dr. T. J. Humphries, Roanoke. Other officers are: vice-president, Dr. Thomas Chalkley, Richmond; and secretary-treasurer, Dr. Armistead P. Booker, Charlottesville (re-elected).

Virginia Association of Mental Health.

Dr. W. T. Thompson, Jr., Richmond, has been elected president of this Association. Dr. Rex Blankinship is a vice-president and Dr. Weir M. Tucker a member of the Board of Directors. They are also from Richmond.

Tri-State Medical Association.

Approximately 200 physicians attended the annual meeting of the Tri-State Medical Association at the Hotel Chamberlin, Old Point Comfort, February 21-22. Dr. Paul D. Camp, Richmond, succeeded Dr. Fred E. Kredel, Charleston, S. C., to the presidency. Other officers are Dr. R. B. McKnight, Charlotte, N. C., president-elect; Drs. W. P. Jordan, Richmond, W. C. Davidson, Durham, N. C., and I. R. Wilson, Charleston, S. C., vice-presidents; Drs. James L. Hamner, Mannboro, W. H. Pott, Greenville, N. C., and Dr. George R. Bunch, Columbia, S. C., state councilors. Charlotte, N. C., was selected as the 1956 place of meeting.

South Atlantic Association of Obstetricians and Gynecologists.

At the meeting of this Association, held in Williamsburg, February 10-12, the following officers were elected: President, Dr. Waverly R. Payne, Newport News; president-elect, Dr. John C. Burwell, Jr., Greensboro, N. C.; vice-president, Dr. Charles J. Collins, Orlando, Fla.; secretary-treasurer, Dr. C. Hampton Mauzy, Winston-Salem, N. C.; and assistant secretary-treasurer, Dr. W. Norman Thornton, Charlottesville.

The next meeting of the Association is to be held at the Hollywood Beach Hotel, Hollywood, Fla., January 28 through February 1, 1956.

News . . . .

Calendar of Coming Events

EASTERN STATES EDUCATION CONFERENCES—New York Academy of Medicine, New York City, April 21-22

INDUSTRIAL HEALTH CONFERENCE—Memorial Auditorium, Buffalo, New York, April 23-29

SOUTHERN REGION OF AMERICAN COLLEGE OF GASTROENTEROLOGY—Memphis, Tennessee, Hotel Peabody, April 24

VIRGINIA SOCIETY OF OPHTHALMOLOGY & OTOLARYNGOLOGY—Natural Bridge, Virginia, May 6-7

VIRGINIA ACADEMY OF GENERAL PRACTICE—Hotel Chamberlin, Old Point, Virginia, May 13-15

AMERICAN COLLEGE OF CHEST PHYSICIANS—Ambassador Hotel, Atlantic City, New Jersey, June 1-5

NEUROPSYCHIATRIC SOCIETY OF VIRGINIA—Radford, Virginia, June 22

Dr. Carrington Williams, Sr.,

Has been appointed interim professor of surgery and chairman of the department of surgery of the Medical College of Virginia. He is to serve on a part-time basis until a successor to the late Dr. Isaac A. Bigger has been chosen.

West Virginia Academy of General Practice.

A scientific program of much more than passing interest is scheduled by the Academy for Charleston, W. Va., on the weekend of April 16 and 17. Physicians in nearby states are cordially invited to attend. Dr. Louis E. Bauer heads the list of speakers and

three deans of major medical schools are to present papers. Each of the other thirteen speakers has attained unquestioned eminence in his field. The meeting schedules a session on pediatrics for Saturday morning, one on medicine that afternoon, one on obstetrics and gynecology Sunday morning and surgery on that afternoon.

Interested physicians should write Dr. Halvard Wanger, Shepherdstown, W. Va., for a more detailed program, etc.

Dr. Walter C. Caudill,

Pearisburg, has announced that he will not seek re-election of the State Senate. He has served in the General Assembly since 1936 and is retiring to devote full time to professional work.

Dr. R. P. Hawkins, Jr.,

Clifton Forge, has been elected president of the Covington-Hot Springs Rotary Club.

Dr. John H. Vaughan,

Richmond, has been elected to membership in the American Academy of Allergy.

Dr. Griffith Honored.

Dr. R. S. Griffith, Waynesboro, was honored by the Masons of Virginia with the presentation of a 60-year pin for his long service in the organization.

Dr. William R. Weisiger,

Richmond, has been elected eminent commander of the Richmond Commandery of Knights of Templars.

Dr. Donald S. Daniel,

Richmond, was elected president of the Southeastern Surgical Congress at its annual meeting in Atlanta in February.

Dr. Berkeley H. Martin, Jr.,

Richmond, is now serving a residency in Ophthalmology at the Episcopal Hospital, Washington, D. C. He is marking his home in Arlington Village, Arlington.

Two Clinical Studies

Which the Clinical Center, Bethesda, Md., desires especially to bring to the attention of physicians generally during the late Winter and early Spring months are listed herewith. Physicians having patients whom they may wish to refer for research study and treatment should write or phone the designated investigator to ascertain whether a particular patient meets the diagnostic and other criteria. If accepted, patients must provide their own transportation to and from Bethesda.

Chemotherapy of Cancer. The National Cancer Institute is planning an expanded program of chemotherapy research in solid tumors. These studies require patients with a proved histologic diagnosis of cancer of any type who have measurable pulmonary, bone or skin metastases, or any combination of these three. In addition, a small miscellaneous group will be incorporated to include patients with easily palpable masses.

Another aspect of the chemotherapy programs is concerned with evaluation of new drugs in the treatment of acute and chronic leukemias. Both adults and children of any age group are acceptable for admission to this study. (Principal Investigator, John Tuohy, M. D.)

Malignant Carcinoid. Every appropriate clinical and laboratory research technique will be used on this National Heart Institute study of a condition which hitherto has been considered very rare. (Principal Investigator, Albert Sjoordsma, M.D.)

A pamphlet outlining admission procedures plus brief descriptions with diagnostic requirements on the nearly 100 separate clinical investigations being undertaken will be furnished any physician on request. Address D. W. Patrick, M. D., Director, The Clinical Center, National Institutes of Health, U.S. Public Health Service, Bethesda 14, Md.

Dr. John B. Birch.

Following the usual three-month period of orientation in one of the City-County training centers of the State Health Department, Dr. Birch will assume duty as Health Director of the Smyth-Washington-Bristol Health District on April 1st.

Dr. William P. McGuire,

Winchester, has been named by Governor Stanley as a member of the Virginia Advisory Hospital Council. Dr. Frank B. Stafford, Charlottesville, was reappointed as a member of the Council.

Dr. T. E. Patterson,

Ransons, has been appointed as a member of the Buckingham County School Trustee Electoral Board.

Dr. M. Josiah Hoover,

Richmond, has been appointed professor and chairman of the Orthopedic Department of the Medical College of Virginia to fill the vacancy caused by the death of Dr. H. Page Mauck. He is a graduate of the College and has been serving as associate professor of orthopedics.

Portrait of Dr. Fisher.

A portrait of the late Dr. John Bowler Fisher, Midlothian, was recently presented to the Chesterfield County Circuit Court.

Northern Virginia Clinical Assembly.

The Sixth Annual Northern Virginia Clinical Assembly, sponsored by the Alexandria Medical Society, will be held on Sunday May 1, at the Magnolia Room, Hunting Towers, Alexandria. The scientific program will be presented by the faculty of the Medical College of Virginia. For a nominal registration fee all physicians are cordially invited to the scientific program, noon luncheon, and evening cocktail party. Physicians' wives and other guests are invited.

For information, contact Dr. Ashby T. Richards, 706 Duke Street, Alexandria.

Physicians Needed.

Eight civilian doctors are needed at the Norfolk Naval Shipyard on a full-time basis. There is one vacancy for a physician qualified in industrial or occupational medicine. This applicant must have had two years of progressively responsible professional experience in the field of occupational health and medicine. The other vacancies are under two ratings, one requiring only the completion of an internship and the other at least one year in the field of medicine. All positions are under civil service.

Any physician who may be interested in this work should get in touch with H. G. Beck, M.D., Captain, USN., Senior Medical Officer, Norfolk Naval Shipyard, Portsmouth, Virginia.

Vacancies at Fort Lee.

There are two vacancies for Medical Officers, Internal Medicine, at Fort Lee, Virginia. Qualifications are two years of progessively responsible professional experience in the field of medicine for which application is being made. An internship or residency may not be included in this two years.

Further information may be obtained from Mabel Hatchett, E. U. Representative, Headquarters, Quartermaster Training Command, Fort Lee, Virginia.

Staff Physician Wanted.

The Health Division of the Oak Ridge National Laboratory, Oak Ridge, Tennessee, is looking for a young staff physician. This position offers an excellent opportunity for experience and advancement in the occupational medicine field. The minimum beginning salary is $760 per month and may be increased depending upon qualifications and training. Expense paid interview trip can be arranged. For further information, write Dr. T. A. Lincoln at the Laboratory.

Wanted.

An E.E.N.T. specialist and a roentgenologist for part time work in clinic located near Richmond. Write #45, c/o Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Virginia. (*Adv.*)

Wanted.

Young, ambitious, energetic general practitioner to be associated with a Clinic Group in Southwest Virginia. Write #50, c/o Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Virginia. (*Adv.*)

Obituaries . . . .

Dr. Walter Stefan Schiff,

Beloved physician of Marion, died January 31st, following a heart attack. He was fifty-eight years of age and a native of Goettingen, Germany. Dr. Schiff served with the German forces in World War I. He was decorated with the Iron Cross, first class, the highest award a German soldier can receive. Following this he began his medical education and established a practice in Braunschweig where he remained until he fled the terrors of the Nazi regime. Dr. Schiff came to Marion in 1940 and was connected with the Lee Memorial Hospital. He was president of the Smyth County Medical Society and an active member of the Rotary Club. He had been a member of The Medical Society of Virginia since 1942.

Numbers of tributes were paid Dr. Schiff in the papers of Southwestern Virginia by members of his profession and laymen. The Roanoke World-News in an editorial stated: "He was never chosen Doctor of the Year or handed any unusual honor. But he did have the gratitude and regard of the people in his adopted community. Three thousand miles from his native land he found the thing which he sought. He taught them what it means to love freedom."

His wife and a son survive him.

Dr. Henry Webster Patton,

Prominent physician of Hartwood, died February 6th, following several years of ill health. He was seventy-eight years of age and a graduate of the Medical College of Virginia in 1901. Dr. Patton had practiced in Stafford County for fifty-three years, having retired in 1952. He served with the Medical Corps in World War I. Dr. Patton had been a

member of The Medical Society of Virginia for forty-six years and was made a Life Member in 1951. His wife and five children survive him.

Dr. David A. Christian, III,

Appomattox, was shot to death while making a midnight emergency call. He was thirty-three years of age and received his medical degree from the University of Virginia in 1947. Dr. Christian had practiced in Appomattox for several years and was "one of the best loved men in town". His wife and three children survive him. His father is Dr. David A. Christian, Jr., also of Appomattox, who had retired because of ill health.

Mr. Max Freydeck,

Pioneer in medical and color photography and official photographer for the Medical College of Virginia for nearly thirty years, died March 5th while vacationing in Florida. He became official photographer for the Medical College of Virginia in 1925 and helped set up the photography department. He retired about ten years ago.

Dr. Bigger

Isaac Alexander Bigger died on January 27, 1955, at the age of 61. The medical profession, the State of Virginia, the Medical College of Virginia, and the Richmond Academy of Medicine has seldom suffered such a loss. His countless friends, patients, house officers, and students were immediately cast into profound sorrow at his untimely passing. Few men are indispensable, nor would they want to be so, yet to a chosen few it is fitting and proper to so classify them. Doctor Bigger was such a man. Brilliant, honest, humble, inspiring, friendly, fatherly, charitable, judicious, careful, earnest, faithful—are some of the many adjectives that fit this man among men.

From the time of his birth in 1893, in a small South Carolina town, to the time of his death, his life had been one of constant leadership and devotion to his high principles and ideals. He rose to the top of his chosen profession by his own diligence and methodical superior ability. The son of a physician, he was introduced to the profession at an early age. When he graduated from the University of Virginia Medical School in 1919, he was chosen to remain there for his surgical training. On the completion of his residency, he remained on the Staff at the University as a surgeon. His qualities of leadership, his devotion to medicine, and his fine christian character were already evident. His future was assured.

At the University he was the roentgenologist as well as Assistant Professor of Surgery. He never lost his ability to see things in x-rays that were not evident to most of us. After a stay of five years on the Virginia staff, he was called to Nashville, where he served as Associate Professor of Surgery under the late Doctor Barney Brooks.

In 1930, when the Medical College of Virginia was looking for a man to head their surgical department, Doctor Bigger was immediately chosen, and he became, at the age of 37, the youngest Professor of Surgery in the country. Few major academic appointments have ever paid such handsome dividends.

When Doctor Bigger came to Richmond, the Medical College of Virginia, though old in years, was in its infancy as far as its recent development was concerned. It has often been said that Doctor Bigger was one of the few who really made that institution and charted its steady course to its present high place. It has also been said that the institution could not recover from the loss of such a man. While it is realized that he could never be replaced, it is because of his work, his prestige, his profound diligence and devotion to his department, his superlative ability as a teacher, surgeon, and trainer of men, that the Medical College of Virginia will go on to even greater heights. He leaves in us a profound sense of personal loss, but we are all pledged in our individual hearts and souls to carry on in his name as he would have wished and encouraged us to do.

Doctor Bigger was one of the chosen few in God's world. Not only was he a surgeon's surgeon, for his technic and skill were truly brilliant, but he was the epitome of all of the factors which compose the true image representing the dignity of man. No greater teacher of surgery ever lived. Countless operations in this country of ours are today being done because "this is the way Doctor Bigger says to do them". He was familiar and intimate with every part of the human body. He was a pioneer in thoracic surgery. He was one of the earliest surgeons to deal successfully with the heart and great vessels. He could invariably change a serious situation into an obvious and simple procedure.

Doctor Bigger was a dedicated man, and few men lived by more personal, christian principles. He never compromised himself or anyone else. He lived as if the Golden Rule was written for him alone. He befriended inumerable people anonymously. He helped many students and nurses both financially and spiritually out of difficult personal problems. The extent of his charity both personal and physical can never be listed, nor would he want it to be. He taught many young surgeons not only technic of operations and the careful performance of them, but he also taught the high ideal of the true practice of medicine. Few of us ever had more devoted patients. One of his colleagues once remarked, "He never took a short cut to anything." Painstaking to a fault, he proceeded to accomplish any task secure in the knowledge that he knew what he was doing, and what he was doing was right.

Doctor Bigger had an uncanny ability in diagnosis. Once he was aware of all of the facts of a given case, he would startle his colleagues with that familiar smile and with a twinkle in his eye and propose a diagnosis that was invariably correct. It was always a comfort to have him around to help his staff with a difficult case. A day hardly passes that we would not like his opinion on some case or problem. As time goes on he will be missed more and more for this and many other reasons.

Dr. Bigger suffered from asthma most of his life. He was deeply hurt when he was rejected for military duty in the last war. He immediately assumed a greater burden at home. His workday began at 8:00 in the morning and ended about 10:00 or 11:00 o'clock that night. It was a familiar sight to see him changing dressings and talking with patients and relatives long after the usual

routine of the hospital had ceased for the day. It is clear now, in retrospect, that this self-denial contributed to his untimely death. Yet Doctor Bigger loved the practice of medicine—he loved his patients—he loved his work—and in return he was loved by everyone.

He was a man of principle and had the capacity for personal loyalty rare among men. The devotion he inspired among his students and colleagues was both of respect and affection. Few committees could function without him. Men loved him for his great humility, were charmed by his genuine shyness.

When in 1950 his former residents gathered to pay him homage for his twenty years of service, and presented his portrait to the Medical College of Virginia, the vast throng so assembled was moved beyond words at his incredulity and by the difficulty with which he stated: "Thank you from the bottom of my heart."

Words are meaningless when one attempts to sum up the life of this man, to enumerate his honors and his achievements, to express how his life influenced that of everyone with whom he came in contact and how deep is our grief and sense of loss. Words, alone, are unnecessary for those of us fortunate to have known him, loved him and respected him. For Doctor Bigger will never completely die. His teachings and his principles will forever be a part of the daily life of all of us, and because of him we will be better physicians, better surgeons, and better men. We will forever be indebted to Isaac Alexander Bigger, surgeon, teacher, and friend to man.

Therefore, Be It Solemnly Resolved

1. That this resolution become a part of the minutes of the Richmond Academy of Medicine.
2. That a copy of this resolution be published in the Virginia Medical Monthly, and
3. That a copy of this resolution be sent to Dr. Bigger's family.

John Truslow
Carrington Williams, Sr.
Herbert C. Lee

Dr. Mauck

In the death of Dr. H. Page Mauck on January 23, 1955, we sustain a heavy loss. The proficiency of his work in orthopedic surgery was outstanding, and with utmost sympathy he spent his life in skilled untiring service to his fellow men.

He was born in Richmond July 28, 1891. His father, John Henry Mauck was a local realtor; his mother Nancy Page Anderson, of an old King and Queen County family. At eighteen he was graduated from John Marshall High School. In the same year, 1909, he entered the Medical College of Virginia, the youngest man in his class. An index to his steadiness of character, admirable diligence and enterprising will, he worked his way through medical school. Living at home, he clerked evenings at a nearby drug store.

He served his internship at the Johnston-Willis Hospital. Commended by Dr. George Ben Johnston, he then got a coveted appointment for further training at Johns Hopkins. There he stayed for several years on the service of Dr. William S. Baer; and there he was the first *non-Hopkins man* appointed to the residency in orthopedic surgery. On his return to Richmond he was for a time associated with the late Dr. William T. Graham.

In 1917, Lieutenant H. P. Mauck, U.S.A.M.C., volunteered with Richmond's "McGuire Unit"; but before Base Hospital 45 debarked for France, he had been transferred to the Surgeon-General's office. With the rank of captain, he was put in charge of orthopedic surgery in the camps of the Southeastern States; he was later assigned to Walter Reed Hospital where he served for ten months. Although due his majority when the war was over, he resigned to resume his independent practice in Richmond.

His success was immediate and constant, justly earned by his conspicuous skill and devotion to his patients. Meanwhile he spent increasing time and energy directing and teaching orthopedics at the Medical College of Virginia, where in 1945 he became Professor of Orthopedic Surgery. From 1928 when the Crippled Children's Hospital was opened here, he was an active charter member of the staff and gave tireless service to its needful work. At the time of his death he was the chief surgeon there. With his associate, Dr. R. D. Butterworth, Dr. Mauck also founded the mobile Tidewater Orthopedic Clinic. Besides his heavy schedule of office work, operating and teaching, he served the lame and crippled people of distant counties through regular visits to these free clinics.

Along with his loyal membership in local, State and Tri-State medical societies, Dr. Mauck was a Fellow of the Southern Surgical Association, the American College of Surgeons, and the American Orthopedic Association, of which distinguished society he was the treasurer. He was also a member of the exclusive and honorary "Robert Jones Club," founded in 1920 and considered the most important "and stimulating" of all orthopedic societies. For each of its original 25 members in the United States no replacement is elected to "the Robert Jones."

Dr. Mauck was a regular contributor to the literature of his surgical specialty.

He was recently appointed to succeed Dr. W. T. Graham on the Virginia State Board of Health. For many years he was a director and chief of the orthopedic service at the Johnston-Willis Hospital, and an elder in the Second Presbyterian Church.

Above all, Doctor Mauck was a true Christian gentleman, a faithful steward of many fine attributes. Through his useful happy life he was generous, peaceable, full of compassion and good will.

He is survived by his wife, who is the former Harriet Hutcheson, a sister of Dr. J. Morrison Hutcheson and of the late Mrs. A. Murat Willis of Richmond. Also by three sons all worthily following him in the medical profession. They are Dr. H. Page Mauck, Jr., assistant resident in medicine at the Medical College of Virginia Hospital, Dr. Robert H. Mauck, an intern at Union Memorial Hospital, Baltimore, and William R. Mauck, a third year student at the Medical College of Virginia.

Though impoverished by his loss, the world is better, far happier because Page Mauck so loved and served it.

Therefore Be It Resolved that this tribute to his memory be spread upon the minutes of the Richmond Academy of Medicine and a copy he sent to the Virginia Medical Monthly.

Be It Further Resolved that a copy also be sent to his immediate family.

D. D. Talley, Jr.
E. T. Gatewood
F. S. Johns, *Chairman*

Dr. Morton.

How hard it is to write about our friend William Richard (Dick) Morton who died January 30, 1955. Dr. Morton was out making a call on one of his patients around midnight when he was involved in an automobile accident and quite severely injured. We watched and prayerfully waited each day for the latest bulletin and our hopes grew with each passing hour until the fatal hour and the Doctor was no more.

Dr. Morton was born at Oxford, N. C., on July 9, 1903, a son of the late James T. and Frances D. Morton. He was educated at Davidson College and the Medical College of Virginia, from which he was graduated in 1926.

He was a member of the Richmond Academy of Medicine and had served on the board of directors; he had just declined the nomination for president-elect of that body in December, 1954. . . . .

Dr. Morton's church and civic activity is shown by his being a steward in his church and a member of the Richmond Chamber of Commerce, Richmond Better Business Bureau and the Barton Heights Citizens' Association.

. . . . . .

Now let us go back to his student days and we read in the 1926 X-Ray, the year book of the Medical College of Virginia, "Here is another from the 'North State'. 'Red' came to us from Oxford, via Davidson College. In spite of his fiery thatch, he is a quiet, unassuming lad who always finds pleasure in serving others and who is ever present whenever any one desires information on the noble art of healing. 'Red' passed through the four-year grind with all ease, and we predict that when he goes back to the waving pines they will welcome him with open arms."

Yes, the fellow student who wrote that short sketch of Dr. Morton had the keen faculty of looking into the future. Those of us who knew him as a student, intern and watched him grow to the full flower of his manhood can vouch for the Doctor who was unassuming, kind and ever ready to go to the help of a patient or professional friend. Yes, he was a friend to all who came his way. His going was expressed most beautifully at his funeral when one of his patients, with tears running down his face, said: "My family has lost a pal." He gave more than his medicine and advice, he gave of himself—truly a physician who carried out the precepts of the Hippocratic Oath, which pledged a doctor "to keep the highest regard for his teacher in the arts and to pass on his medical knowledge to selected individuals" and again to "use treatment to help the sick according to my ability and judgement", "while refraining from unethical practices and maintaining due secrecy; and doing away with suffering of the sick and lessening the violence of the diseases."

Dr. Morton had time and place for only the basic virtues of the medical profession that can be so beautifully summed up in the words of the great Rabbi, physician and philosopher, Maimonides, who died over seven hundred and fifty years ago: "O God ,Thou hast formed the body of man with infinite goodness; Thou has united in him innumerable forces incessantly at work like so many instruments, so as to preserve in its entirety this beautiful house containing his immortal soul, and these forces act with all the order, concord, and harmony imaginable. But if weakness or violent passion disturb this harmony, these forces act against one another, and the body returns to the dust whence it came. Thou sendest then to man Thy messengers, the diseases which announce the approach of danger, and bid him prepare to overcome them. The Eternal Providence has appointed me to watch o'er the life and health of Thy creatures. May the love of my art actuate me at all times, may neither avarice, nor miserliness, nor the thirst for glory or a great reputation engage my mind; for, enemies of truth and philanthropy, they could easily deceive me and make me forgetful of my lofty aim of doing good to Thy children. Endow me with strength of heart and mind, so that both may be ready to serve the rich and the poor, the good and the wicked, friend and enemy, and that I may never see in the patient anything but a fellow creature in pain."

We in the Richmond Academy of Medicine will miss William Richard Morton and his going has left an empty place in our membership; we were the richer for having had him through the years as a friend, counsellor and fellow physician. It is with sad hearts that we say goodby.

Your committee recommends that a copy of this resolution be spread upon the minutes of the Richmond Academy of Medicine as a permanent record of our feelings and that a copy be sent to his family.

Reuben F. Simms, M.D.
Bruce L. Randolph, M.D.
R. C. Siersema, M.D.

Dr. Shelburne

In its regular meeting on February 4, 1955, the Medical Staff of the Martinsville General Hospital passed unanimously the following resolution:

Whereas, we record the death of Dr. James T. Shelburne of Critz and Martinsville, Virginia; and,

Whereas, as a father and husband, Dr. Shelburne was the head of one of the most respected families in his community; and,

Whereas, as physician to Critz and the surrounding community he had earned the love and respect of all; and,

Whereas, in his service to his church and to his patients he was an example and inspiration to all who knew him; and,

Whereas, as a specialist and practitioner, Dr. Shelburne upheld the standards of his profession and was admired and respected by his patients and colleagues alike; and,

Whereas, in his passing, not alone has his family suffered immeasureable loss, but also his colleagues and his community, and this staff;

Therefore, Be It Resolved, that tribute be made and recorded in the official minutes of the Medical Staff of the Martinsville General Hospital;

And Be It Further Resolved, that a copy of this resolution be transmitted to Dr. Shelburne's family as an expression of our sincere sympathy and our heartfelt condolence; and,

Be It Further Resolved, that a copy of this resolution be transmitted to The Medical Society of Virginia and the Martinsville Daily Bulletin.

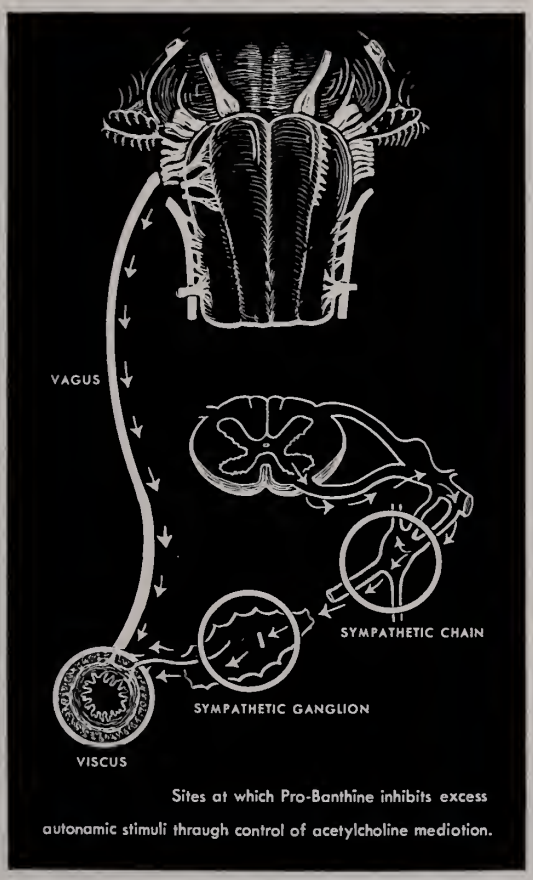
John R. Clark,
President

A Combined Neuro-Effector and Ganglion Inhibitor

Pro-Banthīne consistently controls gastrointestinal hypermotility and spasm and the attendant symptoms.

Pro-Banthine is an improved anticholinergic compound. Its unique pharmacologic properties are a decided advance in the control of the most common symptoms of smooth muscle spasm in all segments of the gastrointestinal tract.

By controlling excess motility of the gastrointestinal tract, Pro-Banthine has found wide use[1] in the treatment of peptic ulcer, functional diarrheas, regional enteritis and ulcerative colitis. It is also valuable in the treatment of pylorospasm and spasm of the sphincter of Oddi.



Sites at which Pro-Banthine inhibits excess autonamic stimuli thraugh control of acetylcholine mediotion.

Roback and Beal[2] found that Pro-Banthine orally was an "inhibitor of spontaneous and histamine-stimulated gastric secretion" which "resulted in marked and prolonged inhibition of the motility of the stomach, jejunum, and colon. . . ."

Therapy with Pro-Banthine is remarkably free from reactions associated with parasympathetic inhibition. Dryness of the mouth and blurred vision are much less common with Pro-Banthine than with other potent anticholinergic agents.

In Roback and Beal's[2] series "Side effects were almost entirely absent in single doses of 30 or 40 mg. . . ."

Pro-Banthine (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is available in three dosage forms: sugar-coated tablets of 15 mg.; sugar-coated tablets of 15 mg. of Pro-Banthine with 15 mg. of phenobarbital, for use when anxiety and tension are complicating factors; ampuls of 30 mg., for more rapid effects and in instances when oral medication is impractical or impossible.

For the average patient one tablet of Pro-Banthine (15 mg.) with each meal and two tablets (30 mg.) at bedtime will be adequate. G. D. Searle & Co., Research in the Service of Medicine.

---

1. Schwartz I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: Gastroenterology *25*:416 (Nov.) 1953.

2. Roback, R. A., and Beal, J. M.: Gastroenterology *25*:24 (Sept.) 1953.

SEARLE

Third Decade of Nursing

MODERN IN EQUIPMENT

MRS. PLYLER'S

KATE E. PLYLER (1876-1947)

PROMPTUS ET FIDELIS

OLD IN TRADITION

NURSING HOME

MARY INGRAM CLARK

CONVALESCENT — CHRONIC — AGED

- Equipped for oxygen and transfusions
- 30 special & general nurses
- 24-hour nursing care
- Centrally located
- 50-bed capacity
- Dietician
- Rates from $42.00 to $70.00 per week for room, board and general nursing care.





For further information write or call MRS. GENE CLARK REGIRER, Supt.

1613-15-17 Grove Avenue—Richmond, Virginia—Telephone 84-3221

RICHMOND EYE HOSPITAL
RICHMOND EAR, NOSE AND THROAT HOSPITAL

(COMBINED)

RICHMOND, VIRGINIA



A new non-profit Community Hospital specially constructed for the treatment of Eye, Ear, Nose and Throat Diseases, including Laryngeal Surgery, Bronchoscopy and Plastic Surgery of the Nose.

Professional care offered a limited number of charity patients.

ADDRESS: **JULIA WAGNER WATERS, R.N., *Administrator*** **408 North 12th Street**

RIVERSIDE CONVALESCENT HOME

Sophia & Fauquier Sts. **Fredericksburg, Virginia**



For convalescent, aged, chronically ill, and retired persons.

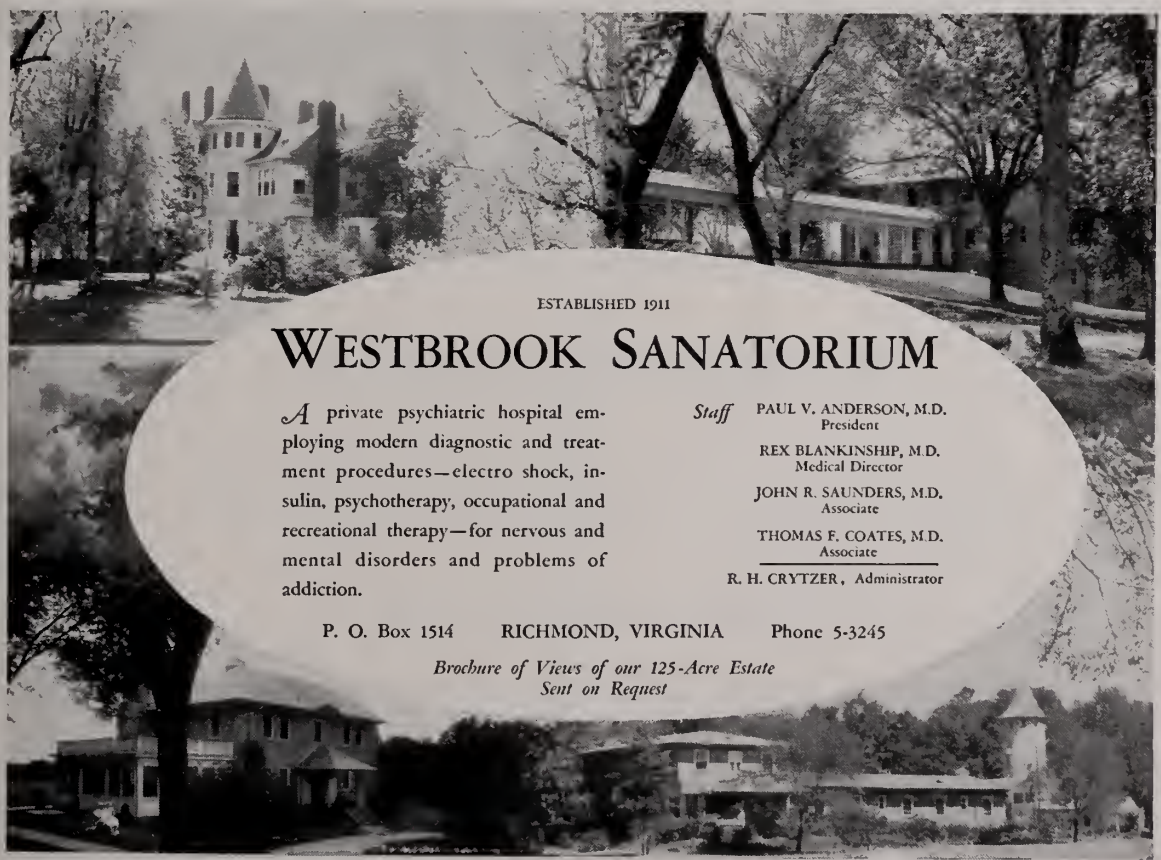
Centrally located in Historic Fredericksburg, on the beautiful Rappahannock, in the former Mary Washington Hospital Building. Completely redecorated and refurnished.

Eighty Bed Capacity

Medical Supervision

Inspection Invited

Rates:
$30.00 to $75.00 per week



ESTABLISHED 1911

WESTBROOK SANATORIUM

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

Staff

PAUL V. ANDERSON, M.D.
President

REX BLANKINSHIP, M.D.
Medical Director

JOHN R. SAUNDERS, M.D.
Associate

THOMAS F. COATES, M.D.
Associate

R. H. CRYTZER, Administrator

P. O. Box 1514 RICHMOND, VIRGINIA Phone 5-3245

Brochure of Views of our 125-Acre Estate Sent on Request

Saint Albans Sanatorium

RADFORD, VIRGINIA



125-BED PRIVATE PSYCHIATRIC HOSPITAL FOR THE TREATMENT OF NERVOUS AND MENTAL DISORDERS, INCLUDING ALCOHOLISM AND ADDICTION.

STAFF

James P. King, M. D., Director

James K. Morrow, M. D. Thomas E. Painter, M. D. Daniel D. Chiles, M. D.

James L. Chitwood, M. D., Medical Consultant

Affiliated Clinic Offering Psychiatric and Psychological Evaluation and Therapy:

BLUEFIELD MENTAL HEALTH CENTER

1400 Bland Street **Bluefield, W. Va.**

David M. Wayne, M. D., Director

TUCKER HOSPITAL Inc.

212 West Franklin Street,

Richmond, Virginia

A private hospital accepting for diagnosis and treatment organic neurological conditions, selected psychiatric and alcoholic cases, metabolic disturbances of an endocrine nature, individuals who are having difficulty with their personality adjustments, and children with behavior problems. Patients with general medical disorders admitted for treatment under our staff of visiting physicians.

Under the Professional Charge of

DR. HOWARD R. MASTERS, DR. JAMES ASA SHIELD

AND ASSOCIATES

Appalachian Hall • Asheville, North Carolina

ESTABLISHED 1916



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, SR., M.D.
Diplomate in Psychiatry
WM. RAY GRIFFIN, JR., M.D.

MARK A. GRIFFIN, SR., M.D.
Diplomate in Psychiatry
MARK A. GRIFFIN, JR., M.D.

For rates and further information write APPALACHIAN HALL, ASHEVILLE, N. C.

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

Medical College of Virginia

HOSPITAL DIVISION

RICHMOND, VIRGINIA

A health center using the latest methods of diagnosis and treatment of disease.

MEDICAL COLLEGE OF VIRGINIA HOSPITAL
OUT-PATIENT DEPARTMENT
SAINT PHILIP HOSPITAL
DOOLEY HOSPITAL

The patient's welfare is our primary interest.

C. P. CARDWELL, JR., *Director*

A Modern Hospital for the Treatment of Alcoholism Exclusively

- A private hospital offering scientific, institutional, medical, psychological, reflex, reduction and other methods for the rehabilitation of consent patients suffering from alcoholism.

- All equipment modern with facilities to take care of 50 patients both male and female.

- Under the direction of a competent licensed M. D. with five consultant physicians subject to call. Registered Nurses in charge 24 hours daily.



Approved and licensed by the Virginia State Hospital Board. Atop beautiful Mt. Regis, five miles West of Roanoke, on Highway 11, in the quiet serene mountains of Virginia, conducive to rest, comfort and recuperation. Doctors inspection invited. For information phone or write.

WHITE CROSS HOSPITAL

Five Miles West of Roanoke on Route No. 11.
Salem, Virginia — Phone Salem 287

WHITE CROSS HOSPITAL

Copyright 1948. H. N. Alford, Atlanta, Ga.

McGUIRE CLINIC

ST. LUKE'S HOSPITAL

RICHMOND, VIRGINIA

General Medicine

HUNTER H. McGUIRE, M.D.
MARGARET NOLTING, M.D.
JOHN P. LYNCH, M.D.
WM. H. HARRIS, JR., M.D.
JOHN B. CATLETT, M.D.

Orthopedic Surgery

JAMES T. TUCKER, M.D.
BEVERLEY B. CLARY, M.D.
EARNEST B. CARPENTER, M.D.

Ophthalmology, Otolaryngology

FRANCIS H. LEE, M.D.

General Surgery

WEBSTER P. BARNES, M.D.
JOHN H. REED, JR., M.D.
JOHN ROBERT MASSIE, JR., M.D.
JOSEPH W. COXE III, M.D.

Dental Surgery

JOHN BELL WILLIAMS, D.D.S.
GUY R. HARRISON, D.D.S.

Urology

AUSTIN I. DODSON, M.D.
CHAS. M. NELSON, M.D.
AUSTIN I. DODSON, JR., M.D.

Pediatrics

HUBERT T. DOUGAN, M.D.

Obstetrics

W. HUGHES EVANS, M.D.
W. H. COX, M.D.
JAMES M. WHITFIELD, M.D.

Bronchoscopy

GEORGE AUSTIN WELCHONS, M.D.

Roentgenology

JESSE N. CLORE, JR., M.D.
STUART J. EISENBERG, M.D.

Pathology

J. H. SCHERER, M.D.

Treasurer: RICHARD J. JONES, BS., C.P.A.

RICHMOND'S FINEST + ONE OF VIRGINIA'S LARGEST

TERRACE HILL NURSING HOME, INC.

"Understanding Care"



View Showing Part of 3½ Acres of Terrace Hill Nursing Home.

TERRACE HILL NURSING HOME is a privately managed nursing home specializing in 24 hour daily nursing care for elderly people, convalescent and chronic cases. Home-like atmosphere. Exclusive park-like grounds. Supervised diets. Nutritious food. Private and semi-private rooms with baths. Accommodations for 45 guests. Under supervision of a resident, registered nurse. Rates from $45.00 to $60.00 per week for room, board and general nursing care. Your inspection invited.

City, State and Nationally Approved and Registered

For Further Information or Reservation write to

DIRECTOR, Terrace Hill Nursing Home • 2112 Monteiro Ave. • Phone 3-3993 • Richmond 22, Va.

Gill Memorial Eye, Ear and Throat Hospital, Inc.

Roanoke, Virginia



STAFF

ELBYRNE G. GILL, M. D.
HOUSTON L. BELL, M. D.
THOMAS QUILTY, M. D.
DORIS L. JANES, B. S., O. D.
(Orthoptics and Contact Glasses)
S. H. HOLLAND, M. D.
ROBERT B. JONES, JR., M. D.

A Modern, Fireproof Hospital, Specially Designed and Equipped for the Medical and Surgical Care of Ophthalmology, Otolaryngology, Facio-Maxillary Surgery, Bronchoscopy and Esophagoscopy.

Complete Laboratory and X-Ray Equipment.

Physicians and Graduate Nurses in Constant Attendance.

The Hospital offers a residentship of three years to a graduate of an approved medical school, who has had an internship of at least one year in an approved hospital.

For further information, address

BUSINESS MANAGER, BOX 1789, ROANOKE, VIRGINIA

RIVERSIDE HOSPITAL, Newport News, Va.



A General Hospital (265 beds) with Departments in Medicine, Surgery, Obstetrics, Pathology, Radiology, Pediatrics and Nursing. The Hospital is accredited by the Council on Medical Education of the American Medical Association for training first year interns, residencies in the surgical specialties for one and two years, general practices two years full approval, internal medicine, and obstetrics and gynecology, and the School of Nursing is accredited by the Virginia State Board of Nurse Examiners.

DAVID E. WATSON,
Administrator

MISS MARY LOUISE HABEL, R.N.,
Director, School of Nursing

ST. ELIZABETH'S HOSPITAL

RICHMOND 20, VIRGINIA

STAFF

Guy W. Horsley, M.D.	General Surgery and Gynecology
D. Coleman Booker, M.D.	General Surgery and Gynecology
Austin I. Dodson, M.D.	Urology
Austin I. Dodson, Jr., M.D.	Urology
J. Edward Hill, M.D.	Urology
Douglas G. Chapman, M.D.	Internal Medicine
Eimer S. Robertson, M.D.	Internal Medicine
T. E. Stanley, M.D.	Internal Medicine
Fred M. Hodges, M.D.	Roentgenology
L. O. Snead, M.D.	Roentgenology
Hunter B. Frischkorn, Jr., M.D.	Roentgenology
Helen Lorraine	Medical Illustration

ADMINISTRATION

William Scott	Business Manager

SCHOOL OF NURSING

The School of Nursing is affiliated with The Johns Hopkins Hospital School of Nursing for a three months' course each in Pediatrics and Obstetrics, and with the Tucker's Hospital in Richmond for a 12 weeks course in Psychiatry.

Address: Superintendent of Nurses

STUART CIRCLE HOSPITAL

413-21 Stuart Circle

RICHMOND, VIRGINIA

Medicine:
Manfred Call, III, M.D.
M. Morris Pinckney, M.D.
Alexander G. Brown, III, M.D.
John D. Call, M.D.
Wyndham B. Blanton, Jr., M.D.

Obstetrics and Gynecology:
Wm. Durwood Suggs, M.D.
Spotswood Robins, M.D.
Edwin B. Parkinson, M.D.

Orthopedics:
Beverley B. Clary, M.D.

Pediatrics:
Charles P. Mangum, M.D.
Edward G. Davis, Jr., M.D.

Ophthalmology, Otolaryngology:
W. L. Mason, M.D.

Pathology:
Regena Beck, M.D.

Anesthesiology
William B. Moncure, M.D.
Heth Owen, Jr., M.D.

Surgery:
A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr., M.D.

Urological Surgery:
Frank Pole, M.D.

Oral Surgery:
Guy R. Harrison, D.D.S.

Plastic Surgery:
Hunter S. Jackson, M.D.

Roentgenology and Radiology:
Fred M. Hodges, M.D.
L. O. Snead, M.D.
Hunter B. Frischkorn, Jr., M.D.
William C. Barr, M.D.

Physiotherapy:
Miss Etheleen Dalton

Director:
Charles C. Hough

THE LOUISE C. GODWIN NURSING HOME, INC.

"Nursing care with kindness"

AGED AND CHRONICALLY ILL
MODEST RATES

LOUISE GODWIN TAYLOR, R.N., Pres.
MARGARET K. MILLER, Sec.-Treas.

Bus. 55514 — 813 Stockley Gardens
Res. 83046 — Norfolk 7, Virginia

The ... Thompson Homestead School

FOR EXCEPTIONAL CHILDREN

Year round private home and school for infants, children and adults on pleasant 250 acre farm near Charlottesville.

Write for booklet.

MRS. J. BASCOM THOMPSON, *Principal*

FREE UNION — **VIRGINIA**

In very special cases
A very superior Brandy



SPECIFY ★ ★ ★

HENNESSY

THE WORLD'S PREFERRED COGNAC BRANDY
84 PROOF Schieffelin & Company, New York, N.Y.

The State Board of Medical Examiners of Virginia

The next meeting of the Board will be held at the Richmond Hotel, Richmond, Virginia, June 15, 1955, and the examinations will be held at the same hotel June 16 to 18, inclusive. June 1st is the deadline for receipt of applications for the examination and documents and papers to be discussed and acted upon by the Board. The secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

Complete Printing and Binding Service

Commercial, Book and Job Work, Catalogues—Publications
Advertising Literature, Booklets—Broadsides
Office and Factory Forms
Loose-Leaf and Manifold Forms—Ledger Leaves and Loose-Leaf Binders
Paper Ruling
Complete Binding Equipment

Complete Service Under One Roof

Acquaint us with your requirements. We serve you efficiently and economically.

Dial 3-1881

WILLIAMS PRINTING CO.

11-13-15 North Fourteenth Street — **RICHMOND, VIRGINIA**

Upjohn

Rheumatoid arthritis, rheumatic fever, intractable asthma, allergies . . .

Cortef* *tablets*

Supplied:

5 mg. tablets in bottles of 50
10 mg. tablets in bottles of 25, 100, 500
20 mg. tablets in bottles of 25, 100, 500

*REGISTERED TRADEMARK FOR THE UPJOHN BRAND OF HYDROCORTISONE (COMPOUND F)

The Upjohn Company, Kalamazoo, Michigan



'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

Foot-so-Port Shoe Construction and its Relation to Center Line of Body Weight



1. The highest percent of sizes in the shoe business are sold in Foot-so-Port shoes to the big men and women who have found that Foot-so-Port construction is the strongest, because .....

- The patented arch support construction is guaranteed not to break down.
- Special heels are longer than most anatomic heels and maintain the appearance of normal shoes.
- Insole extension and wedge at inner corner of the heel where support is most needed.
- Innersoles are guaranteed not to crack, curl, or collapse. Insulated by a special layer of Texon which also cushions firmly and uniformly.

2. Foot-so-Port lasts were designed and the shoe construction engineered with the assistance of many top orthopedic doctors. We invite the members of the medical profession to wear a pair — prove to yourself these statements.

3. We make more pairs of custom shoes for polio feet and all types of abnormal feet than any other manufacturer.

FOOT-SO-PORT SHOES for Men, Women, Children

There is a **FOOT-SO-PORT** agency in all leading towns and cities. Refer to your Classified Directory

Foot-so-Port Shoe Company, Oconomowoc, Wis.

The American Way

is peace, prosperity, and goodwill toward our fellow man—to invest our time in educating and learning; and our money in good citizens and fine institutions.



One of the finest institutions of your State is Richmond Hotels Incorporated, one that maintains the highest modern hotel standards . . . one that combines the hospitality and charm of the old and the convenience and comfort of the new.

John Marshall William Byrd
King Carter Richmond

Richmond Hotels Incorporated

proof of performance shown by proof of preference



Sealy's Accepted Posturepedic Mattress now*

WORLD'S LARGEST SELLING POSTUREPEDIC MATTRESS

To patients suffering from morning backache due to sleeping on an inferior mattress or improperly fitted bedboards, you may suggest the Sealy Posturepedic, with confidence.

*Accepted for advertising in the Journal of the American Medical Association, Sealy's Posturepedic is now the most widely used mattress of its type in the world. Since it is correctly *firm* it insures proper sleeping posture, gives natural support and complete comfort, too. For patients bothered by "low" morning backache, possibly caused by sleeping on a flabby mattress or make-shift bedboard, you may mention the Sealy Posturepedic *knowing* it is giving helpful relief in steadily increasing thousands of cases.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Sealy

SLEEPING ON A SEALY IS LIKE SLEEPING ON A CLOUD

SEALY MATTRESS COMPANY
Railroad Avenue, Bluefield, Va.
8 South Harvie Street, Richmond, Va.

Results With

'ANTEPAR'®*

against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

For the
Discriminating
Eye Physician

Depend on the Services of a Guild Optician

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

in
Lynchburg, Virginia

A. G. JEFFERSON

Ground Floor **Allied Arts Bldg.**

Exlusively Optical

today's health *a must!*

for your reception room



Physicians'
Half-Price Rates

4 years	$4.00
3 years	3.25
1 year	1.50

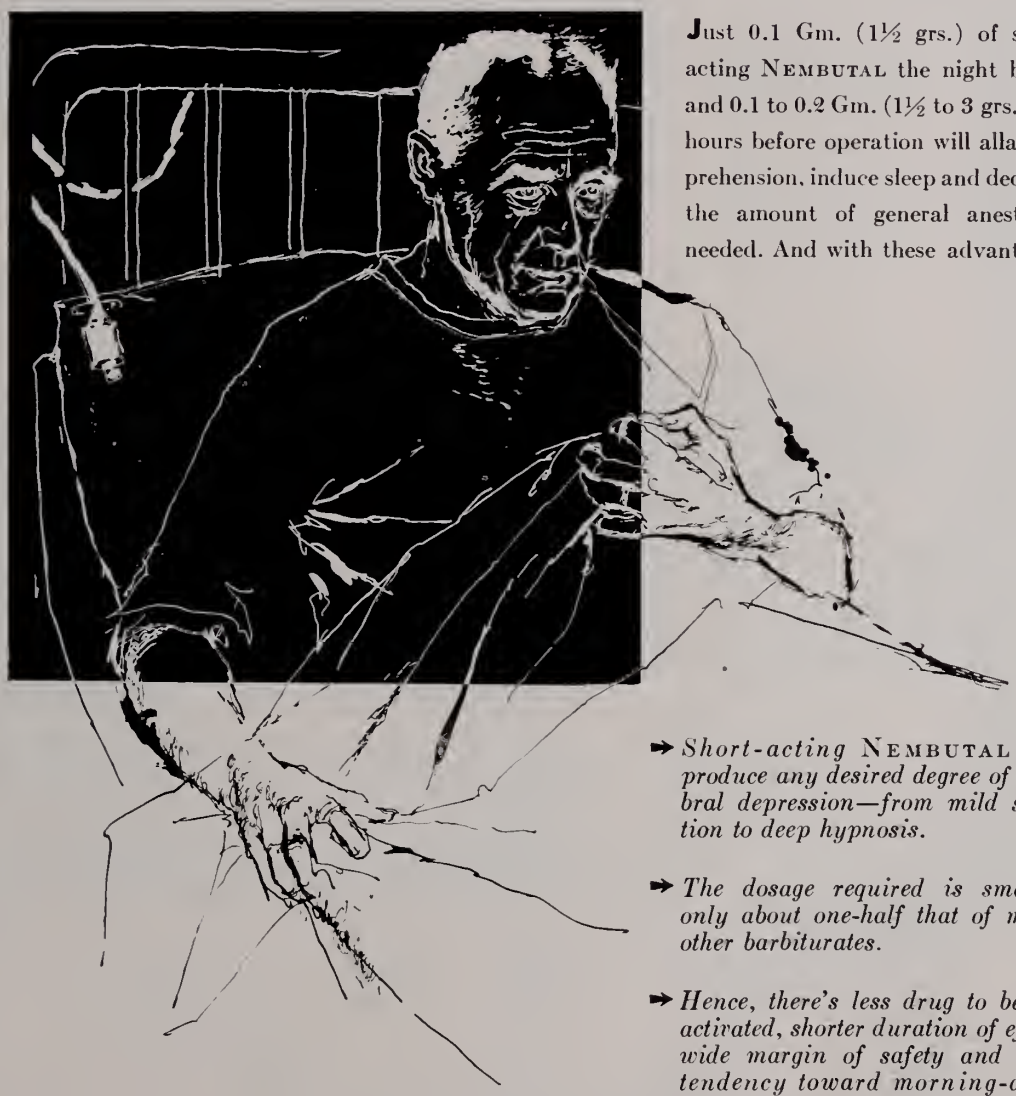
AMERICAN MEDICAL ASSOCIATION
535 North Dearborn · Chicago 10, Illinois

PREOPERATIVE SEDATION...

one of the 44 uses for

short-acting **NEMBUTAL®**

(Pentobarbital, Abbott)



Just 0.1 Gm. (1½ grs.) of short-acting NEMBUTAL the night before and 0.1 to 0.2 Gm. (1½ to 3 grs.) two hours before operation will allay apprehension, induce sleep and decrease the amount of general anesthetic needed. And with these advantages:

➡ *Short-acting* NEMBUTAL *can produce any desired degree of cerebral depression—from mild sedation to deep hypnosis.*

➡ *The dosage required is small—only about one-half that of many other barbiturates.*

➡ *Hence, there's less drug to be inactivated, shorter duration of effect, wide margin of safety and little tendency toward morning-after hangover.*

➡ *In equal oral doses, no other barbiturate combines quicker, briefer, more profound effect.* Abbott

504091



Whenever the diet is faulty, the appetite poor, or the loss of food is excessive

through vomiting or diarrhea—

Valentine's
MEAT EXTRACT

stimulates the appetite,
increases the flow of digestive juices,
provides: supplementary amounts of vitamins, minerals and soluble proteins,
extra-dietary vitamin B_{12},
protective quantities of potassium, in a palatable and readily assimilated form.

Supplied in bottles of 2 or 6 fluidounces.

***Dosage** is 1 teaspoonful two or three times daily; two or three times this amount for potassium therapy.*

VALENTINE Company, Inc.
RICHMOND 9, VIRGINIA

At All
DEPENDABLE
PRESCRIPTION SERVICE
and
SERVICE TO PHYSICIANS

PATTERSON'S
SAFE SERVICE DRUG STORES

Prescription Specialists

Lynchburg, Va. **Martinsville, Va.**
Danville, Va. **Altavista, Va.**
Winston-Salem, N. C.

Every Virginia Doctor Should Have These Books!

The history of medicine in the Old Commonwealth from Jamestown to the beginning of the present century is a work every doctor should be proud to own. Complete and intensely interesting.

Medicine In Virginia

In 3 Volumes
Published under Auspices of
Medical Society of Virginia

Reduced price to members of the Medical Society of Virginia
3 Volumes for $5.75
(formerly $9.75)

Order through
Medical Society of Virginia
1105 West Franklin Street
Richmond, Virginia



READING TIME—1 MINUTE

A FEW FACTS FOR THE BUSY DOCTOR WHO WANTS THE

Latest Information About Filter Tip Cigarettes

Your patients are interested in cigarettes! From the large volume of writing on this subject, Brown & Williamson Tobacco Corp. would like to give you a few facts about *Viceroy*.

Only Viceroy gives you, your patients, and all cigarette smokers 20,000 Filter Traps in every filter tip. These filter traps, doctor, are composed of a pure white non-mineral cellulose acetate. They provide the maximum filtering efficiency possible without affecting the flow of smoke or the full flavor of Viceroy's quality tobaccos.

Smokers report Viceroys taste even better than cigarettes without filters.



King-Size Filter Tip

VICEROY

World's Most Popular Filter Tip Cigarette

Only a Penny or Two More Than Cigarettes Without Filters





know your diuretic

will your cardiac patients be able to continue the diuretic you prescribe

?

uninterrupted therapy is the key factor in diuretic control of congestive failure. You can prescribe NEOHYDRIN every day, seven days a week, as needed.

TABLET

NEOHYDRIN®

BRAND OF CHLORMERODRIN

(18.3 MG. OF 3-CHLOROMERCURI-2-METHOXY-PROPYLUREA IN EACH TABLET)

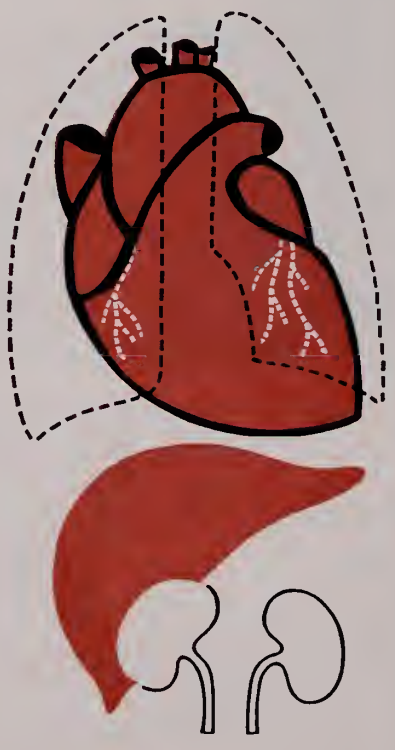
no "rest" periods...no refractoriness

acts only in kidney...

no unwanted enzyme inhibition in other parts of the body.

standard for initial control of severe failure MERCUHYDRIN® SODIUM

BRAND OF MERALLURIDE INJECTION



Leadership in diuretic research

Lakeside LABORATORIES, INC., MILWAUKEE 1, WISCONSIN

One of a Series of Newspaper Ads. Directed to Your Patients and Our Customers....





specific therapy against the cocci...

Now, you can prescribe an antibiotic (*Filmtab* ERYTHROCIN) that is specific therapy for most bacterial respiratory infections. Specific therapy—because these infections are caused by staph-, strep- or pneumococci. *And the cocci are the very organisms most sensitive to* ERYTHROCIN. In fact, you'll find ERYTHROCIN more active against this group of organisms than many other antibiotics.

filmtab **Erythrocin®** STEARATE

(ERYTHROMYCIN STEARATE, ABBOTT)

Against streptococci

This is an actual sensitivity test with a strain of *Streptococcus pyogenes* on a blood agar plate. Note the high activity of ERYTHROCIN against this organism. This same streptococcus may be associated with *sinusitis . . . otitis media . . . tonsillitis . . . pneumonia . . . empyema . . . pharyngitis . . . septicemia . . . tracheobronchitis . . . streptococcal sore throat . . . scarlet fever . . . erysipelas . . . certain urinary tract infections . . .* and certain cases of *subacute bacterial endocarditis* and *osteomyelitis.*

Against common intestinal flora

This sensitivity test shows ERYTHROCIN and the same antibiotics against a typical intestinal strain of *E. coli*. Note that ERYTHROCIN and penicillin do not affect growth of this organism—while the other antibiotics show marked inhibitory action. Since ERYTHROCIN is inactive against gram-negative organisms, *it is less likely to cause alteration in common intestinal flora—with an accompanying low incidence of side effects.*



...with little risk of serious side effects

The main reason is because ERYTHROCIN acts specifically. It destroys only harmful coccic invaders—yet doesn't materially change normal intestinal flora. *Thus, your patients rarely get side effects from* ERYTHROCIN. Nor do they get the allergic reactions sometimes seen with penicillin therapy. *Filmtab* ERYTHROCIN (100 and 200 mg.) comes in bottles of 25 and 100. Won't you prescribe *Filmtab* ERYTHROCIN—soon? Abbott

filmtab

Erythrocin® STEARATE

(ERYTHROMYCIN STEARATE, ABBOTT)

804129

The very attributes that make Jaguar the world's foremost sports car make it particularly suitable to *your* exacting profession.

The speed that brought Jaguar home a winner in over 46 major races . . . for your emergency calls. Maneuverability . . . that weaves you through the worst traffic. Oversize racing brakes . . . for quick stops and safety under all conditions. Dependability . . . so necessary in your active practice.

For instance, a Jaguar hard top coupe was driven 7 continuous days and nights . . . 16,851 non-stop miles . . at an average speed of over 100 m.p.h. Yet after this grueling test, technicians found it would have passed new car inspection!

just what the doctor ordered!

The new Jaguar coupe . . . with its quiet good looks, world renowned XK-140 engine and very much enlarged space behind the front seat . . . is truly Rx for *you!* Arrange for a demonstration today!



XK-140 Super Sports Coupe.
$3795
Port of Entry,
White walls extra.

JAGUAR

the finest car of its class in the world

HARPER MOTORS, INC.
901 Preston Avenue
CHARLOTTESVILLE, VA.
Tel. 28191

FOREIGN CAR DIST. INC.
806 Granby Street
NORFOLK, VA.
Tel. 40663

TRANS-PORT SALES & SERVICE, INC.
1010 N. Boulevard
RICHMOND, VA.
Tel. 51775

IMPERIAL MOTORS OF FAIRFAX
Route 29
Nr. FALLS CHURCH, VA.
Tel. Jefferson 43302

IMPERIAL CAR DISTRIBUTORS, INC., Academy and Washington, HAMPTON, VA. Tel. 4383



the last tablet as accurate as the first

sealed-in-foil CLINITEST® BRAND REAGENT TABLETS

a rapid, reliable urine-sugar test every time because every batch of *Clinitest* Sealed-in-Foil Reagent Tablets is tested for stability under conditions as exacting as a tropical rainy season—86° to 90° temperatures and 95% humidity.

Clinitest Reagent Tablets, Sealed in Foil, boxes of 24 and 500.

AMES DIAGNOSTICS
Adjuncts in Clinical Management

AMES COMPANY, INC • ELKHART, INDIANA
Ames Company of Canada, Ltd., Toronto

62754

UNSURPASSED

HYPOALLERGENIC

SOYA FORMULA

MILK-FREE

FOR INFANTS

. . . due to exclusive formulation and dramatic new processing methods

Physical advantages

- pleasant, bland flavor . . . no "burned or raw bean" taste . . . color is light, appetizing, "formula-like."
- exceptionally well tolerated . . . stools satisfactory . . . does not cause diarrhea or other gastrointestinal disturbances . . . babies take feedings well.
- easy to prepare—1 part Liquid Sobee to 1 part water for a formula supplying 20 calories per fluid ounce.

Nutritional advantages

- Liquid Sobee® is a well balanced formula, not a mere "soybean milk" . . . caloric distribution based on authoritative recommendations for infant formulas . . . no added carbohydrate needed.
- new processing methods prevent usual destruction of amino acids and important B vitamins . . . Liquid Sobee supplies 4.8 mg. of iron per quart of normal dilution.

The important first step in management of infant food sensitivities is Liquid Sobee. Because milk is the most common offender,[1,2,3,4] many physicians start infants on Liquid Sobee at the slightest suspicion of food allergy.

Available in 15½ fl. oz. cans

(1) Butler, A. M., and Wolman, I. J.: Quart. Rev. Pediat. 9: 63, 1954. (2) Moore, I. H.: Journal-Lancet 74: 80, 1954. (3) Collins-Williams, C.: J. Pediat. 45: 337, 1954. (4) Clein, N. W.: Ann. Allergy 9: 195, 1951.

LIQUID SOBEE

MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA, U.S.A. MEAD

FFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

VIRGINIA MEDICAL MONTHLY

Contents

Preventive Gynecology, D. A. D'Esopo . . . 213

Dangers of Blood Tranfusions, Ambrose G. Hampton, Jr., Charles L. Crockett, Jr., Byrd S. Leavell . . . 217

Chondromalacia of the Patella, John S. Thiemeyer, Jr. . . . 225

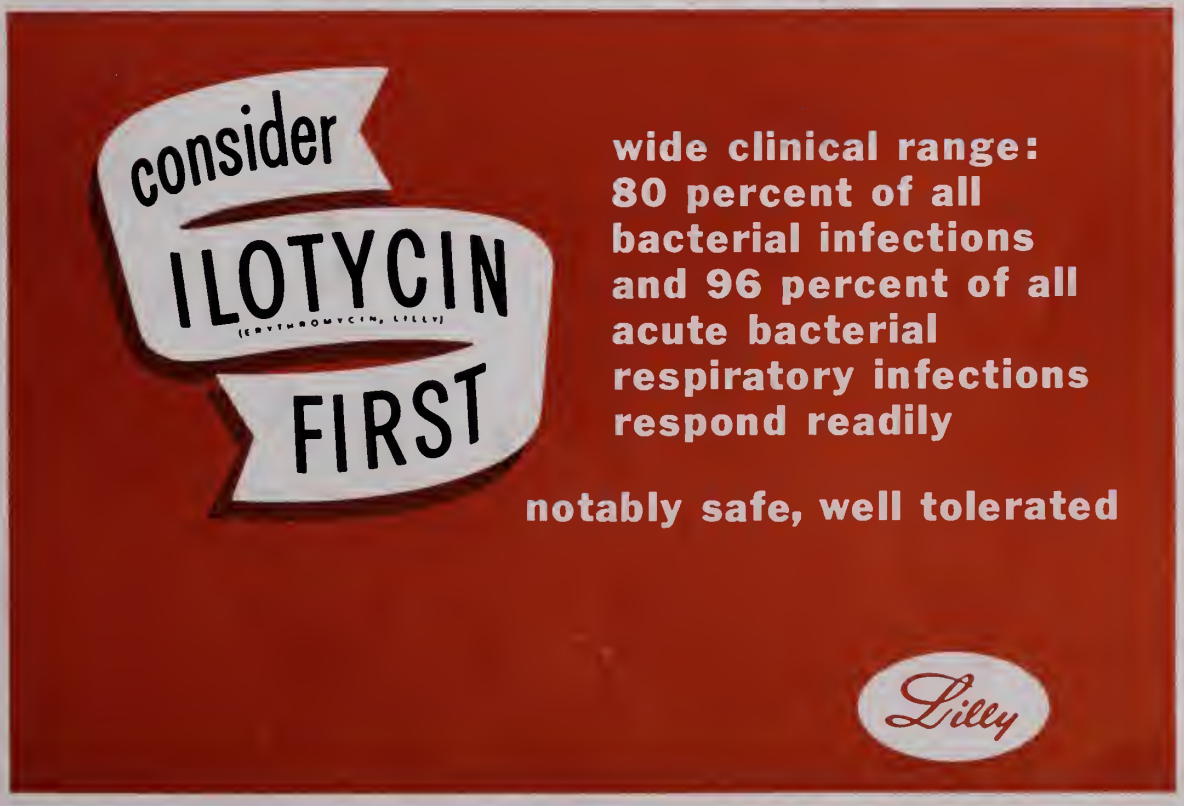
Maxillary Sinusitis in Children: Its Relation to Coryza, Tonsillectomy and Adenoidectomy, H. Grant Preston . . . 229

Cystosarcoma Phyllodes, D. Edward Watkins . . . 233

A Discussion of Ventral Hernia, Dennis P. McCarty . . . 237

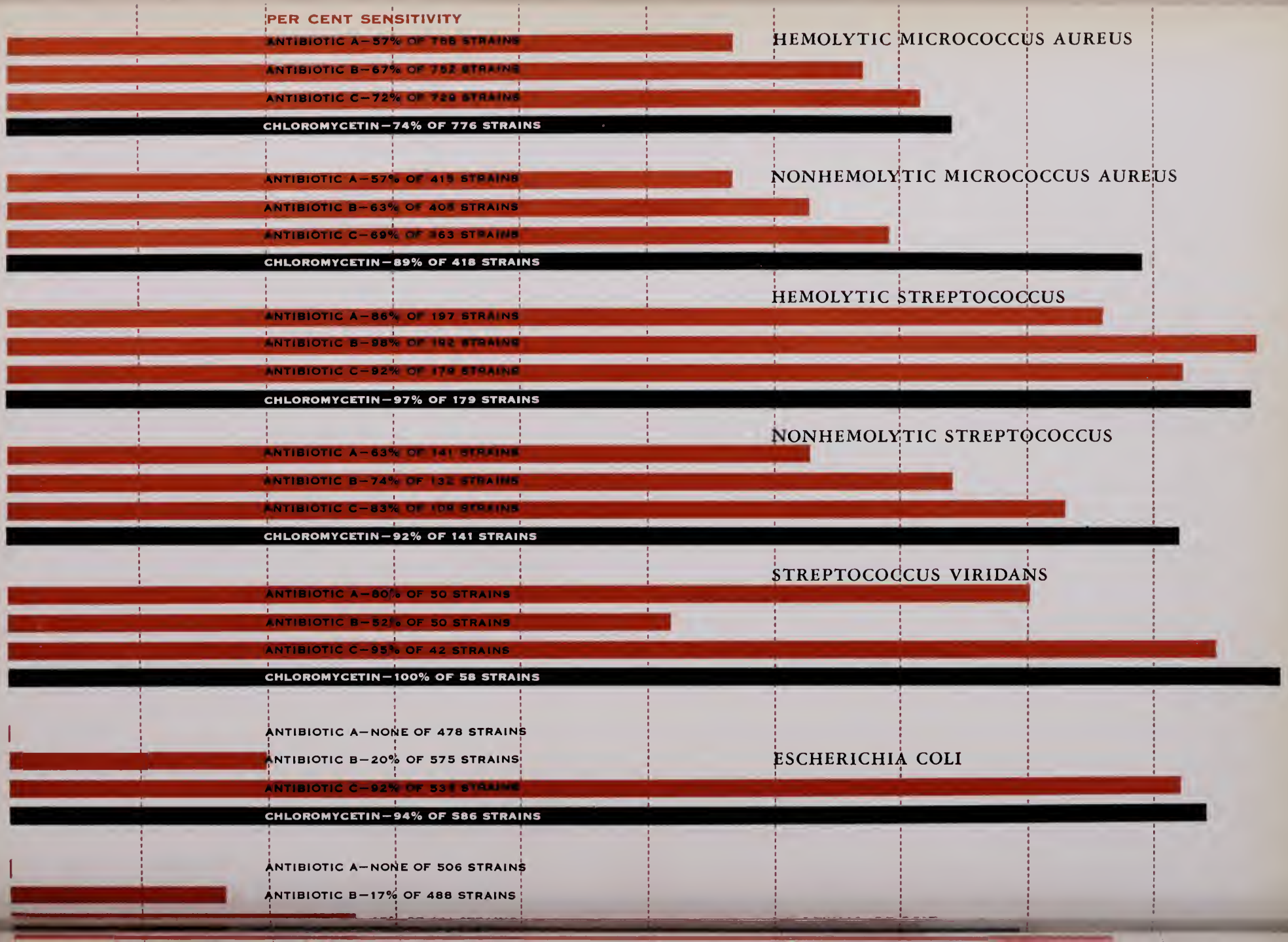
(Continued on page 6)

OF MEDICINE
MAY -3 1955
LIBRARY.

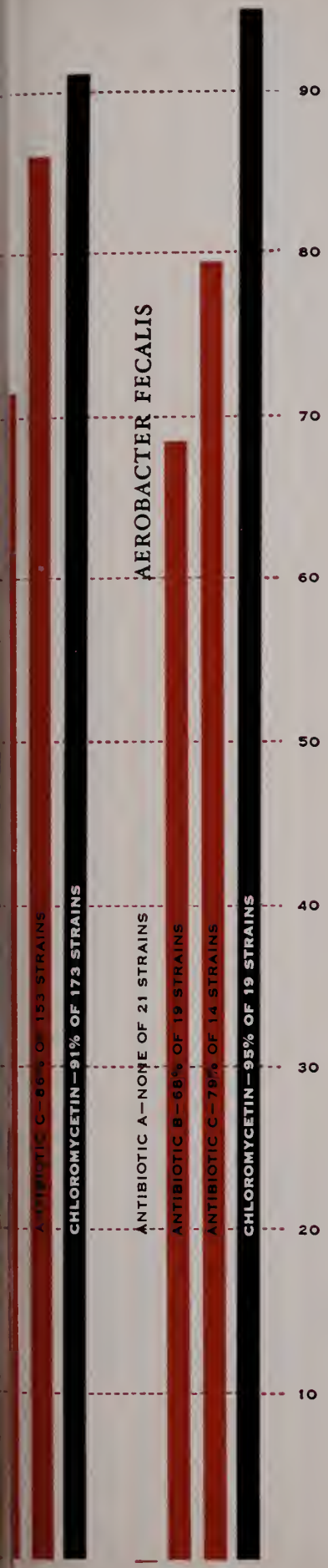


THE MEDICAL SOCIETY OF VIRGINIA
RICHMOND, OCTOBER 16-19, 1955

MAY, 1955


PER CENT SENSITIVITY
HEMOLYTIC MICROCOCCUS AUREUS
ANTIBIOTIC A—57% OF 768 STRAINS
ANTIBIOTIC B—67% OF 752 STRAINS
ANTIBIOTIC C—72% OF 728 STRAINS
CHLOROMYCETIN—74% OF 776 STRAINS
NONHEMOLYTIC MICROCOCCUS AUREUS
ANTIBIOTIC A—57% OF 415 STRAINS
ANTIBIOTIC B—63% OF 405 STRAINS
ANTIBIOTIC C—69% OF 363 STRAINS
CHLOROMYCETIN—89% OF 418 STRAINS
HEMOLYTIC STREPTOCOCCUS
ANTIBIOTIC A—86% OF 197 STRAINS
ANTIBIOTIC B—98% OF 192 STRAINS
ANTIBIOTIC C—92% OF 179 STRAINS
CHLOROMYCETIN—97% OF 179 STRAINS
NONHEMOLYTIC STREPTOCOCCUS
ANTIBIOTIC A—63% OF 141 STRAINS
ANTIBIOTIC B—74% OF 132 STRAINS
ANTIBIOTIC C—83% OF 109 STRAINS
CHLOROMYCETIN—92% OF 141 STRAINS
STREPTOCOCCUS VIRIDANS
ANTIBIOTIC A—80% OF 50 STRAINS
ANTIBIOTIC B—52% OF 50 STRAINS
ANTIBIOTIC C—95% OF 42 STRAINS
CHLOROMYCETIN—100% OF 58 STRAINS
ESCHERICHIA COLI
ANTIBIOTIC A—NONE OF 478 STRAINS
ANTIBIOTIC B—20% OF 575 STRAINS
ANTIBIOTIC C—92% OF 538 STRAINS
CHLOROMYCETIN—94% OF 586 STRAINS
ANTIBIOTIC A—NONE OF 506 STRAINS
ANTIBIOTIC B—17% OF 488 STRAINS

sensitivity of common pathogens to CHLOROMYCETIN and three other major antibiotic agents



more effective against more strains...

Chloromycetin®

for today's problem pathogens

Because of the increasing emergence of pathogenic strains resistant to commonly used antibiotics, judicious selection of the most effective agent is essential to successful therapy. In vitro sensitivity studies serve as a valuable guide to the antibiotic most likely to be most effective. Both clinical experience and sensitivity studies indicate the greater antibacterial efficacy of CHLOROMYCETIN (chloramphenicol, Parke-Davis) in the treatment of many common infections.

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

Adapted from Altemeier, W. A.; Culbertson, W. R.; Sherman, R.; Cole, W.; Elstun, W., & Fultz, C. T.: *J.A.M.A.* 157:305 (Jan. 22) 1955.

MEDICAMENTA VERA

Parke, Davis & Company
DETROIT, MICHIGAN

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April 1874)

Published monthly by The Medical Society of Virginia.

PUBLICATION COMMITTEE

Lewis H. Bosher, Jr., M.D., *Chairman and Editor*
Wyndham B. Blanton, M.D. Lloyd B. Burk, M.D.
with
EDITORIAL BOARD
J. Morrison Hutcheson, M.D.
Cato Drash, M.D.
Ennion S. Williams, M.D.
A. Brownley Hodges, M.D.
Hugh H. Trout, Jr., M.D.

The MONTHLY is not responsible for the opinions and statements of its contributors.

All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

Managing Editor—E. SPENCER WATKINS
1105 West Franklin Street, Richmond 20.

Annual Subscription—$2.00 Single Copies—25¢

Second-class mail privileges authorized at Richmond, Virginia

THE MEDICAL SOCIETY OF VIRGINIA

OFFICERS

President—CARRINGTON WILLIAMS, M.D., Richmond

President-Elect—JAMES P. KING, M.D., Radford

Vice-Presidents—JAMES W. LOVE, M.D., Alexandria
WAVERLY R. PAYNE, M.D., Newport News
BENJAMIN W. RAWLES, JR., M.D., Richmond

Executive Secretary-Treasurer—ROBERT I. HOWARD, Richmond

Councilors—A. A. CREECY, M.D., Newport News
WALTER P. ADAMS, M.D., Norfolk
GUY W. HORSLEY, M.D., Richmond
W. J. OZLIN, M.D., South Hill
L. P. BAILEY, M.D., Nathalie
FRANK A. FARMER, M.D., Roanoke
H. W. MILLER, M.D., Woodstock
McLEMORE BIRDSONG, M.D., Charlottesville
JAMES P. WILLIAMS, M.D., Richlands
HARRY C. BATES, JR., M.D., Arlington

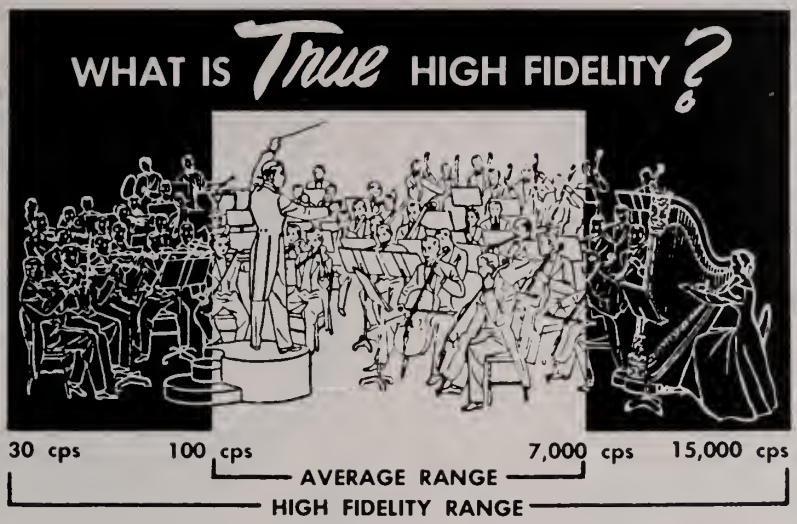
Delegates to A.M.A.
J. M. HUTCHESON, M.D., Richmond
VINCENT W. ARCHER, M.D., Charlottesville

Alternate Delegates to A.M.A.
ALLEN BARKER, M.D., Roanoke
W. LINWOOD BALL, M.D., Richmond

Executive Office—1105 W. Franklin St., Richmond 20.

INDEX TO ADVERTISERS

Abbott Laboratories ---- 10-11
American Meat Institute ---- 12
American Medical Association ---- 14
Appalachian Hall ---- 30
Audio Center ---- 5
Ayerst ---- 38
Bayer Company Division, The ---- 18
Burroughs Wellcome & Co. (U.S.A.) Inc. ---- 14, 15
Davies, Rose & Co., Ltd. ---- 15
First and Merchants National Bank of Richmond ---- 6
Foot-so-Port Shoe Company ---- 19
Garst Bros. Dairy ---- 6
Gill Memorial Eye, Ear and Throat Hospital, Inc. ---- 33
Imperial Car Distributors, Inc. ---- 20
Jefferson, A. G. ---- 19
Johnston-Willis Hospital ---- 30
Keleket X-ray Corporation ---- 36
Kent Cigarettes ---- 47
Lakeside Laboratories, Inc. ---- 9
Lederle Laboratories Division ---- 6, 44-45
Lily & Co., Eli ---- Front Cover, 24
McGuire Clinic—St. Luke's Hospital ---- 32
Mead Johnson & Company ---- 48
Medical College of Virginia ---- 30
Medical Society of Virginia, The ---- 4, 14
New York Polytechnic Medical School and Hospital, The ---- 39
Parke, Davis & Company ---- 2-3
Patterson's Safe Service Drug Stores ---- 19
Peoples Service Drug Stores ---- 37
Pfizer Laboratories ---- 7, 34
Plyler's Nursing Home, Mrs. ---- 27
Richmond Eye Hospital, Richmond Ear, Nose and Throat Hospital ---- 27
Richmond Hotels Incorporated ---- 19
Riverside Convalescent Home ---- 28
Riverside Hospital ---- 33
Saint Albans ---- 29
Schering Corporation ---- 13, 22-23
Sealy Mattress Company ---- 16
Searle & Company G. D. ---- 25
Squibb ---- 35
State Board of Medical Examiners of Virginia, The ---- 39
St. Elizabeth's Hospital ---- 26
Stuart Circle Hospital ---- 26
Terrace Hill Nursing Home, Inc. ---- 32
Thompson Homestead School, The ---- 39
Tucker Hospital Inc. ---- 29
United Insurance Company ---- 8
United States Brewers Foundation ---- 46
Upjohn Company, The ---- 17, 41
U. S. Savings Bonds ---- 42
Valentine Company, Inc. ---- 16
Viceroy Cigarettes ---- 21
Virginia Bakers Council, The ---- 43
Virginia Medical Monthly ---- 4
Westbrook Sanatorium ---- 28
White Cross Hospital ---- 31
Winthrop-Stearns Inc. ---- 40
Williams Printing Co. ---- 38, 39



TRUE HIGH FIDELITY REPRODUCTION OF MUSIC is completely realistic and comparable only to the original performance. **Don't be misled** by the term "HI-FI" now being applied to many widely advertised radios, phonographs and consoles. Most of these are new only in price and appearance. They are incapable of the full-range, distortion-free performance necessary for truly realistic sound. Their average range is from 100 to 7,000 cycles. Since the full range is 30 to 15,000 cycles, **you are hearing only one-half the music!**

OVER 3,000 DISCRIMINATING AMERICANS a week are choosing TRUE high fidelity. Before you buy a phonograph or radio compare it with the superb performance of the music systems at the AUDIO CENTER. These provide faithful reproduction over the entire audible range of 30 to 15,000 cycles. The pitch and timbre of every sound from the lowest notes of the giant organ to the vibrations of the cymbals are indistinguishable from the original rendition. **You hear concert-quality music!**

YOUR ENTIRE FAMILY will enjoy countless hours of musical pleasure listening to their favorite orchestras and vocalists on records or FM broadcasts. Real music appreciation is possible only with high fidelity reproduction.

YOU ARE INVITED to visit our new demonstration room where all leading lines of high fidelity equipment are on display. Hear and compare. Listen and know the thrill of TRUE high fidelity.

OPEN EVENINGS FOR YOUR CONVENIENCE. HOURS: 9 A. M. to 9 P. M. on weekdays . . . 10 A. M. to 4 P. M. on Saturdays.





1st

In Every Neighborhood

8 Convenient Locations in Richmond

FIRST AND MERCHANTS

NATIONAL BANK OF RICHMOND

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

specify

LEDERLE

POLIOMYELITIS IMMUNE GLOBULIN

(human)

Lederle

For the modification of measles and the prevention or attenuation of infectious hepatitis and poliomyelitis.

LEDERLE LABORATORIES DIVISION

AMERICAN Cyanamid COMPANY Pearl River, New York

GRADE A PASTEURIZED PRODUCTS

GARST BROS. DAIRY INC.

DIAL 5501

GRADE A MILK
HOMOGENIZED MILK (Natural Vitamin D added)
GOLDEN GUERNSEY MILK
GOLDEN FLAKE BUTTERMILK
SKIM MILK—COFFEE CREAM
WHIPPING CREAM—COTTAGE CHEESE
DARI-RICH CHOCOLATE MILK
GARST BROS. DAIRY BUTTER

"ROANOKE'S MOST MODERN DAIRY"

DIAL 5501

LABORATORY CONTROL FOR YOUR PROTECTION

CONTENTS

(Continued)

Mental Health	239
Book Announcements	241
Public Health	242
Medico-Legal Notes	243
Notes on Pulmonary Tuberculosis	244
Woman's Auxiliary	249
President's Message	251
Editorial	252
Society Proceedings	253
News	254
Obituaries	256

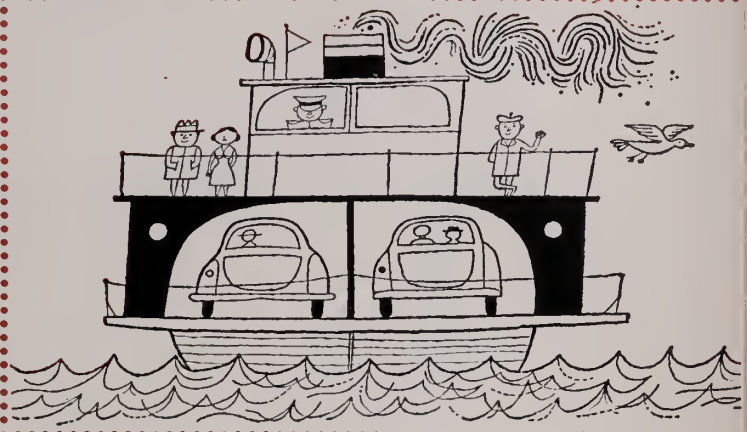
INDEX TO ADVERTISERS—Page 4.

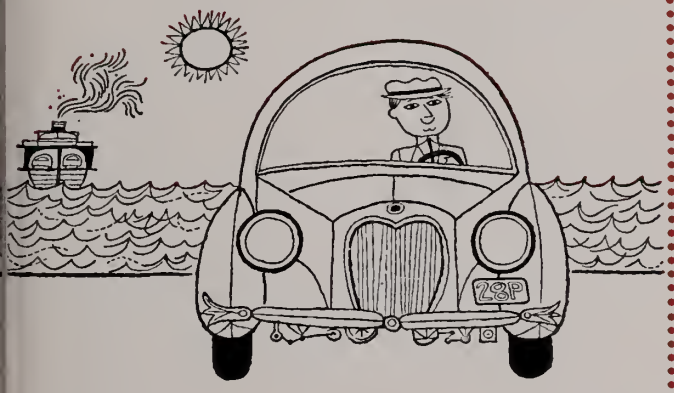
Entered as Second Class Matter at the Postoffice, Richmond, Va.

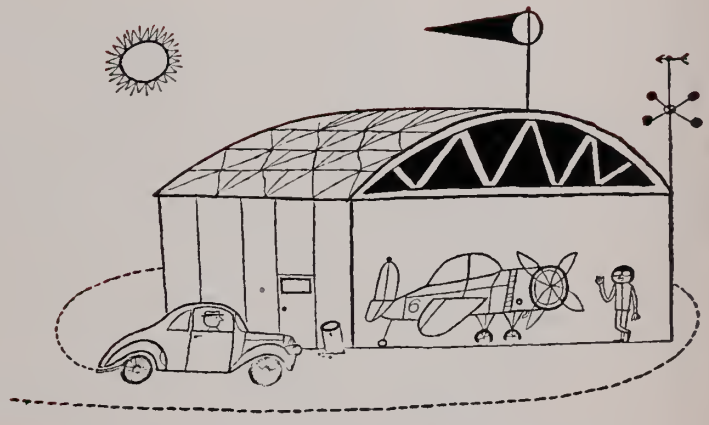






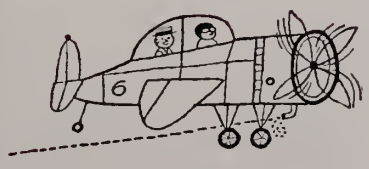






. . . a comfortable voyage now assured with **Bonamine*** HCl

BRAND OF MECLIZINE HYDROCHLORIDE



. . . the first motion-sickness preventive effective in a single daily dose

. . . prevents or relieves motion sickness due to all forms of travel

. . . available on prescription only for full physician supervision

Bonamine *is also useful in controlling the nausea, vomiting and vertigo associated with vestibular and labyrinthine disturbances, cerebral arteriosclerosis, radiation therapy and Menière's syndrome.*

Supplied in scored, tasteless 25 mg. tablets, boxes of 8 and bottles of 100 and 500.

*TRADEMARK

Pfizer

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, N. Y.

Income* for the members of the Virginia Medical Profession from the first day* of sickness or injury...

NOW! Not for only 26 weeks
— Not for only 52 weeks

but even for your entire lifetime

House Confinement not required at any time

Accidental loss of hand, feet or eyesight pays monthly benefits — not just a lump sum

TAX FREE DOLLARS — Disability insurance income is not taxable. For example, $3600 disability insurance income is equivalent to about $5000 regular income

EXTRA BENEFITS — Double monthly benefits while you are hospitalized payable for as long as three months

Cash benefits for accidental death

Double income benefits if disabled in specified travel accident named in the policy

OTHER IMPORTANT FEATURES — Waiver of Premium Provision • Limited Commercial Air Line Passenger Coverage • No Automatic Termination Age During Policy Period • A Special Renewal Agreement

Covers most accidents from date of policy and most sickness originating more than 30 days after date of policy, excepting those incurred while in military service of any country at war, or resulting from war, any act of war, suicide, attempted suicide, insanity, mental disease, certain foreign travel, any pre-existing condition or any hazard of aviation other than commercial air line passenger travel

UNITED INSURANCE COMPANY

(MP-3033)

UNITED INSURANCE COMPANY, Lifetime Disability Income Dept.
Eig Building, Silver Spring, Maryland

I would like more information about your lifetime disability income protection

I understand I shall not be obligated

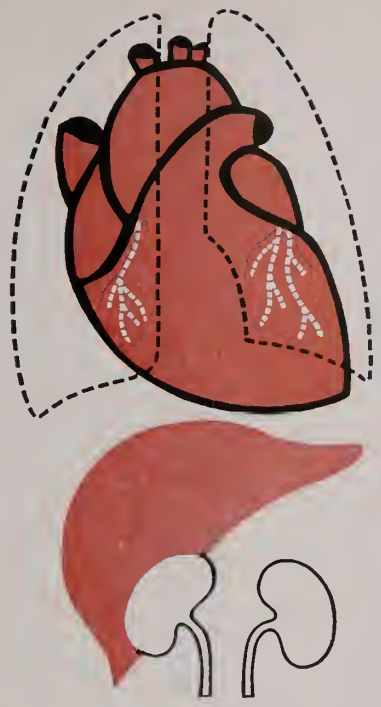
Name ..... Age .....

Address .....
or attach letterhead

***Income payable from first day of medical attention and as long as continuous total disability, total loss of time and medical attendance continue**

Mail coupon today while you are still healthy

know your diuretic



how safe is the diuretic you prescribe?

the utmost in safety, confirmed by long clinical usage, is one reason more physicians choose the organomercurials for diuresis. Their dependable action does not involve production of acidosis or specific depletion of potassium, and side effects due to widespread enzyme inhibition are absent.

TABLET
NEOHYDRIN®
BRAND OF CHLORMERODRIN (18.3 MG. OF 3-CHLOROMERCURI-2-METHOXY-PROPYLUREA IN EACH TABLET)

no "rest" periods • no refractoriness

NEOHYDRIN can be prescribed every day, seven days a week as needed

a standard for initial control of severe failure

MERCUHYDRIN® SODIUM
BRAND OF MERALLURIDE INJECTION

Leadership in diuretic research
Lakeside LABORATORIES, INC., MILWAUKEE 1, WISCONSIN

88655



specific therapy against the cocci...

Now, you can prescribe an antibiotic (*Filmtab* ERYTHROCIN) that is specific therapy for most bacterial respiratory infections. Specific therapy—because these infections are caused by staph-, strep- or pneumococci. *And the cocci are the very organisms most sensitive to* ERYTHROCIN. In fact, you'll find ERYTHROCIN more active against this group of organisms than many other antibiotics.

filmtab

Erythrocin® STEARATE

(ERYTHROMYCIN STEARATE, ABBOTT)

Against streptococci

This is an actual sensitivity test with a strain of *Streptococcus pyogenes* on a blood agar plate. Note the high activity of ERYTHROCIN against this organism. This same streptococcus may be associated with *sinusitis . . . otitis media . . . tonsillitis . . . pneumonia . . . empyema . . . pharyngitis . . . septicemia . . . tracheobronchitis . . . streptococcal sore throat . . . scarlet fever . . . erysipelas . . . certain urinary tract infections . . .* and *certain cases of subacute bacterial endocarditis* and osteomyelitis.

Against common intestinal flora

This sensitivity test shows ERYTHROCIN and the same antibiotics against a typical intestinal strain of *E. coli*. Note that ERYTHROCIN and penicillin do not affect growth of this organism—while the other antibiotics show marked inhibitory action. Since ERYTHROCIN is inactive against gram-negative organisms, *it is less likely to cause alteration in common intestinal flora—with an accompanying low incidence of side effects.*



...with little risk of serious side effects

The main reason is because ERYTHROCIN acts specifically. It destroys only harmful coccic invaders—yet doesn't materially change normal intestinal flora. *Thus, your patients rarely get side effects from* ERYTHROCIN. Nor do they get the allergic reactions sometimes seen with penicillin therapy. *Filmtab* ERYTHROCIN (100 and 200 mg.) comes in bottles of 25 and 100. Won't you prescribe *Filmtab* ERYTHROCIN—soon? Abbott

filmtab

Erythrocin® STEARATE

(ERYTHROMYCIN STEARATE, ABBOTT)

604125

Meat...

Dietary Cholesterol and Vascular Sclerosis

Recent studies reaffirm the "hypothesis that atherosclerosis is fundamentally a metabolic disease subject to important dietary influences"[1] and do much to refute contentions that foods containing cholesterol should be avoided in general diets.

Arterial disease resembling that in human subjects was produced in Cebus monkeys fed diets high in cholesterol and low in sulfur amino acids. Within 2 to 8 weeks after initiation of the regimen serum concentration of cholesterol rose to levels of 300 to 800 mg. per 100 ml. "The hypercholesterolemia could be largely prevented by feeding 1 gram per day of dl-methionine or l-cystine as supplements to the diet." Also, the elevated cholesterol levels "could be restored to normal by feeding 1 gram of dl-methionine but only partially restored by 0.5 gram of l-cystine daily."

According to the investigators, the "vascular lesions were in the ascending aorta but extended from the valves of the left ventricle to the proximal portions of the carotid and femoral arteries . . . The aortic lesions were chiefly characterized by the presence of lipid-laden phagocytes and increase in collagen and elastic fibers. The lipids were in part cholesterol derivatives."

Cholesterol, an essential metabolite produced in intermediary metabolism,[2] is biosynthesized from dietary protein, fat, and carbohydrate.[3] Normally, its synthesis is exquisitely controlled to insure adequacy as well as to protect against an oversupply.[4] Furthermore, considerable evidence indicates that an increased cholesterol intake is not an etiologic factor in alleged aberrations of cholesterol metabolism such as atherosclerosis.

In widely variable amounts, cholesterol occurs in foods of animal origin—meat, poultry, fish and marine foods, eggs, milk products—all foods of great nutritive value.[3] Present knowledge in no way warrants alteration in the customary consumption of these foods because of their contained cholesterol.

Skeletal muscle of beef, lamb, pork, and veal provides but small amounts of cholesterol, approximately 0.06 Gm. per 100 Gm. moist weight of meat.[5] Since atherosclerosis may interfere sharply with normal nutrition, the patient should consume diets rich in protein foods (such as meat), vitamins, and fruit.[6] In addition to high quality protein, meat supplies valuable amounts of needed B vitamins and essential minerals.

1. Mann, G. V.; Andrus, S. B.; McNally, A., and Stare, F. J.: Experimental Atherosclerosis in Cebus Monkeys, J. Exper. Med. *98*:195, 1953.
2. Okey, R.: Use of Food Cholesterol in the Animal Body; Relation of Other Dietary Constituents, J. Am. Dietet. A. *30*:231 (Mar.) 1954.
3. McLester, J. S., and Darby, W. J.: Nutrition and Diet in Health and Disease, ed. 6. Philadelphia, W. B. Saunders Company, 1952, pp. 517-518.
4. Editorial: The Biosynthesis of Cholesterol, J.A.M.A. *152*:1435 (Aug. 8) 1953.
5. Okey, R.: Cholesterol Content of Food, J. Am. Dietet. A. *21*:341 (June) 1945.
6. Wright, I. S.: Arteriosclerosis, in Stieglitz, E. J.: Geriatric Medicine, Medical Care of Later Maturity, ed. 3, Philadelphia, J. B. Lippincott Company, 1954, chap. 28, p. 413.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

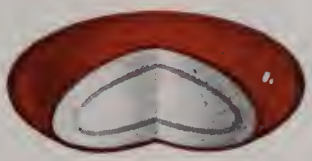
ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

American Meat Institute

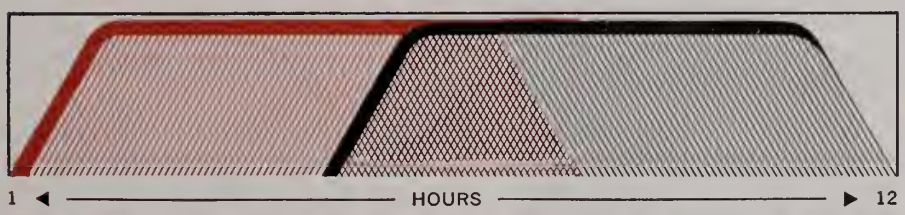
Main Office, Chicago...Members Throughout the United States

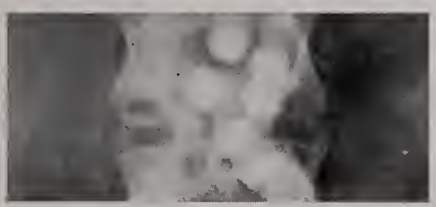
how one
CHLOR-TRIMETON *REPETAB*
assures 8-12 hours' sustained relief in hay fever

Outer layer dissolves immediately providing rapid onset of relief



Special Timed Barrier (not enteric coating) releases inner layer for prolonged effect





Inner core still intact 2½ hours after ingestion of 6 special radiopaque REPETABS*



At 4½ hours disintegration of cores well underway—complete in four, beginning in two.*

*Unretouched x-rays.

*the **REPETAB** principle assures prolonged sustained relief with single dose convenience*

CHLOR-*TRIMETON*® Maleate, brand of chlorprophenpyridamine maleate.
REPETABS,® Repeat Action Tablets.

Schering

CHLOR-TRIMETON *REPETAB*

SCHERING INC

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

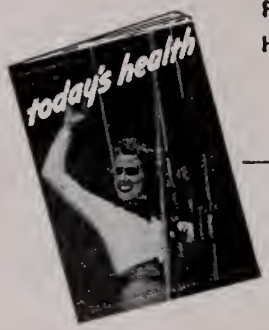
Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

today's health a must!

for your reception room



Physicians' Half-Price Rates

4 years	$4.00
3 years	3.25
1 year	1.50

AMERICAN MEDICAL ASSOCIATION
535 North Dearborn · Chicago 10, Illinois

Every Virginia Doctor Should Have These Books!

The history of medicine in the Old Commonwealth from Jamestown to the beginning of the present century is a work every doctor should be proud to own. Complete and intensely interesting.

Medicine In Virginia

In 3 Volumes

Published under Auspices of
Medical Society of Virginia

Reduced price to members of the Medical Society of Virginia

3 Volumes for $5.75
(formerly $9.75)

Order through

Medical Society of Virginia
1105 West Franklin Street
Richmond, Virginia

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

Results With

'ANTEPAR'®*

against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.:
J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.:
Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.:
J. Pediat. 45:419, 1954.

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

proof of performance shown by proof of preference



Sealy's Accepted Posturepedic Mattress now*

WORLD'S LARGEST SELLING POSTUREPEDIC MATTRESS

To patients suffering from morning backache due to sleeping on an inferior mattress or improperly fitted bedboards, you may suggest the Sealy Posturepedic, with confidence.

*Accepted for advertising in the Journal of the American Medical Association, Sealy's Posturepedic is now the most widely used mattress of its type in the world. Since it is correctly *firm* it insures proper sleeping posture, gives natural support and complete comfort, too. For patients bothered by "low" morning backache, possibly caused by sleeping on a flabby mattress or make-shift bedboard, you may mention the Sealy Posturepedic *knowing* it is giving helpful relief in steadily increasing thousands of cases.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Sealy

SLEEPING ON A *SEALY* IS LIKE SLEEPING ON A CLOUD

SEALY MATTRESS COMPANY

Railroad Avenue, Bluefield, Va.
8 South Harvie Street, Richmond, Va.



Whenever the diet is faulty, the appetite poor, or the loss of food is excessive

through vomiting or diarrhea—

Valentine's MEAT EXTRACT

stimulates the appetite,

increases the flow of digestive juices,

provides: supplementary amounts of vitamins, minerals and soluble proteins,

extra-dietary vitamin B_{12},

protective quantities of potassium, in a palatable and readily assimilated form.

Supplied in bottles of 2 or 6 fluidounces.

***Dosage** is 1 teaspoonful two or three times daily; two or three times this amount for potassium therapy.*

VALENTINE Company, Inc.

RICHMOND 9, VIRGINIA

Upjohn

Ulcer protection that lasts all night:

Pamine tablets

Bromide

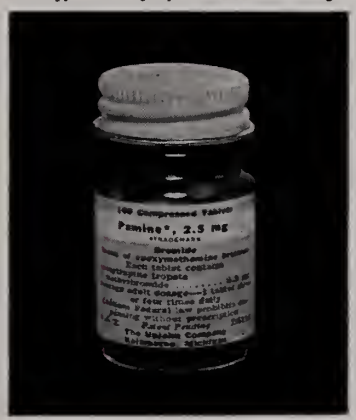
REGISTERED TRADEMARK FOR THE UPJOHN BRAND OF METHSCOPOLAMINE

Each tablet contains:
Methscopolamine bromide
2.5 mg.

Average dosage (ulcer):
One tablet one-half hour before meals, and 1 to 2 tablets at bedtime.

Supplied:
Bottles of 100 and 500 tablets.

The Upjohn Company, Kalamazoo, Michigan





Thank you doctor for telling mother about...



- The Best Tasting Aspirin you can prescribe
- The Flavor Remains Stable down to the last tablet
- 15¢ Bottle of 24 tablets (2½ grs. each)

We will be pleased to send samples on request

THE BAYER COMPANY DIVISION of Sterling Drug Inc., 1450 Broadway, New York 18, N. Y.

At All

DEPENDABLE

PRESCRIPTION SERVICE

and

SERVICE TO PHYSICIANS

PATTERSON'S
SAFE SERVICE DRUG STORES

Prescription Specialists

Lynchburg, Va. **Martinsville, Va.**
Danville, Va. **Altavista, Va.**
Winston-Salem, N. C.

The American Way

is peace, prosperity, and goodwill toward our fellow man—to invest our time in educating and learning; and our money in good citizens and fine institutions.



One of the finest institutions of your State is Richmond Hotels Incorporated, one that maintains the highest modern hotel standards . . . one that combines the hospitality and charm of the old and the convenience and comfort of the new.

John Marshall William Byrd
King Carter Richmond

Richmond Hotels Incorporated

For the
Discriminating
Eye Physician

Depend on the Services of a Guild Optician

in
Lynchburg, Virginia

A. G. JEFFERSON

Ground Floor **Allied Arts Bldg.**

Exlusively Optical

Foot-so-Port Shoe Construction and its Relation to Center Line of Body Weight



1. The highest percent of sizes in the shoe business are sold in Foot-so-Part shaes to the big men ond women wha hove found that Foot-so-Part canstructian is the strongest, becouse . . . . . .

- The patented arch support constructian is guaronteed nat ta breok down.
- Speciol heels are longer thon most anotomic heels ond maintain the appearonce of normol shoes.
- Insale extension and wedge at inner carner af the heel where suppart is mast needed.
- Innersales are guaranteed not ta crack, curl, or collapse. Insulated by a speciol layer af Texan which olsa cushians firmly and uniformly.

2. Foot-so-Port losts were designed ond the shoe construction engineered with the ossistonce of many top orthapedic doctars. We invite the members of the medical profession ta wear o poir — prove ta yourself these stotements.

3. We make more pairs af custam shoes for palio feet ond oll types af abnormal feet than ony other monufacturer.

FOOT-SO-PORT SHOES for Men, Women, Children

There is a **FOOT-SO-PORT** ogency in oll leoding towns ond cities. Refer to your Classified Directory

Foot-so-Port Shoe Company, Oconomowoc, Wis.

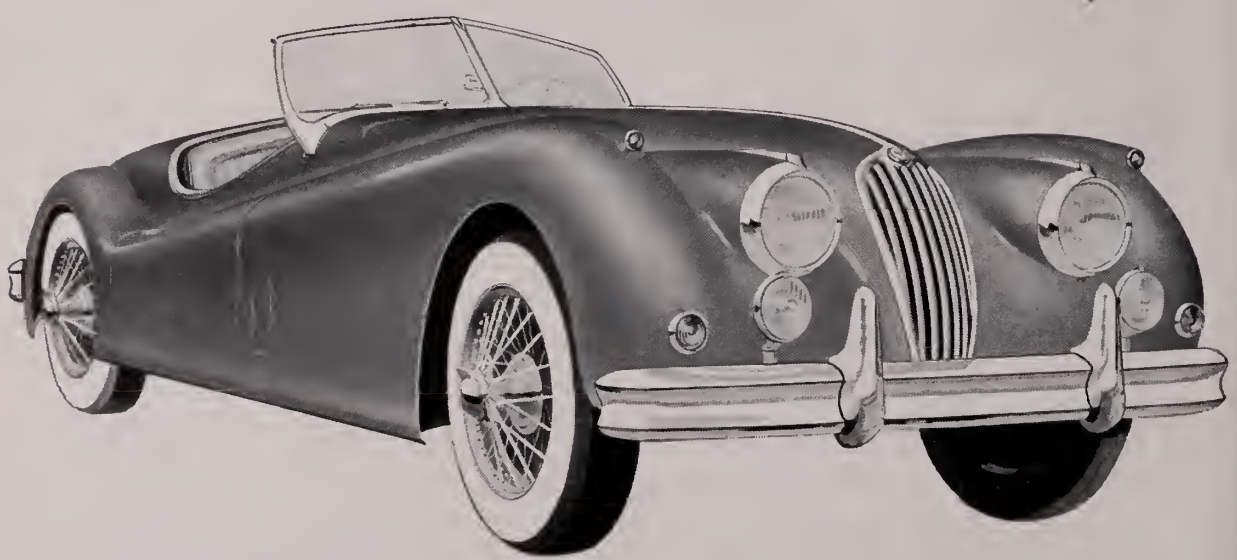
spice for life...

Developed in the toughest international races,
Jaguar is not only the world's fastest production car
... and the safest ... but the most fun to drive!
With its famed XK-140 engine,
now even more powerful ...
precision race car rack-and-pinion steering ...
oversize racing brakes ... enlarged cockpit
for greater comfort, Jaguar adds spice
to your life, fun to your driving!

Note: Recently, a production model Jaguar was driven 7 days and 7 nights ... 16,851 miles at an average speed of over 100 mph. Yet after this grueling test technicians found it could pass new car inspection!

JAGUAR

the finest car of its class in the world



XK-140 Sports Roadster, $3450 port of entry. Wire wheels, white walls extra.
Also, in Convertible and Coupe—now with 2 occasional seats in rear—and Mark VII-M Family Sports Sedan.
Going abroad? See your Jaguar dealer about money-saving overseas delivery.

HARPER MOTORS, INC.
901 Preston Avenue
CHARLOTTESVILLE, VA.
Tel. 28191

FOREIGN CAR DIST. INC.
806 Granby Street
NORFOLK, VA.
Tel. 40663

IMPERIAL MOTORS OF FAIRFAX
Route 29
Nr. FALLS CHURCH, VA.
Tel. Jefferson 43302

IMPERIAL CAR DISTRIBUTORS, INC., Academy and Washington, HAMPTON, VA. Tel. 4383



DOCTOR, here's a question and an answer you may find useful when patients ask about cigarettes:

What do Viceroys do for you that no other filter tip can do?



These filter traps, doctor, are composed of a pure white non-mineral cellulose acetate. They provide maximum filtering efficiency without affecting the flow of the smoke.

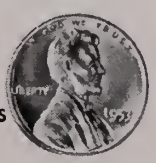
And, in addition, they enhance the flavor of Viceroy's quality tobaccos to such a degree that smokers report they taste even better than cigarettes without filters.



King-Size Filter Tip **VICEROY**

WORLD'S MOST POPULAR FILTER TIP CIGARETTE

ONLY A PENNY OR TWO MORE THAN CIGARETTES WITHOUT FILTERS



announcing
a new era in
corticosteroid therapy



METICORTEN

PREDNISONE, SCHERING

new crystalline
adrenocorticoid
first discovered and
introduced by

Schering

In a planned search for more effective substances without undesirable actions, new crystalline corticosteroids have been discovered in Schering's research laboratories.

Possessing three to five times the therapeutic effectiveness of cortisone or hydrocortisone in rheumatoid arthritis and other so-called collagen diseases, intractable asthma and other allergies, and nephrosis, the first of these, METICORTEN* is less likely to produce undesirable side actions, particularly sodium retention and excessive potassium depletion. Patients treated with this new steroid exhibit less tendency to fluid retention, and sedimentation rate may be lowered even where other corticoids cease to be effective—"therapeutic escape." This new compound affords excellent relief of pain, swelling and tenderness, diminishes joint stiffness and is effective in small dosage.

METICORTEN, is available as 5 mg. scored tablets, bottles of 30. In the treatment of rheumatoid arthritis, dosage of METICORTEN begins with an average of 20 to 30 mg. (4 to 6 tablets) a day. This is gradually reduced by 2½ to 5 mg. until maintenance dosage of 5 to 20 mg. daily is reached, usually by the 14th day. The total 24-hour dose should be divided into 4 parts and administered *after meals and at bedtime*. Patients may be transferred directly from hydrocortisone or cortisone to METICORTEN without difficulty.

SCHERING CORPORATION • BLOOMFIELD, N. J.

SCHERING

*T.M. Schering



'Seconal Sodium'

(SECOBARBITAL SODIUM, LILLY)

a barbiturate of rapid action . . . short duration

When simple insomnia is the presenting complaint, a bedtime dose of 'Seconal Sodium' is often indicated. Its hypnotic effect is prompt—within fifteen to thirty minutes; relaxation and sleep follow quickly. Your patient awakens refreshed and well rested.

Available in 1/2, 3/4, and 1 1/2-grain pulvules.

Lilly

QUALITY / RESEARCH / INTEGRITY

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U.S.A.

The Virginia
MEDICAL
MONTHLY

May, 1955
Vol. 82, No. 5
Whole No. 1235

Preventive Gynecology

D. A. D'ESOPO, M.D.,
New York, N. Y.

PREVENTIVE gynecology is chiefly, although not entirely, concerned with the early detection and cure of cancer of the female reproductive organs. Women are more fortunate than men in this respect, for the site of their most prevalent malignant neoplasms—the breast and the uterus— are easily accessible to direct examination. For this reason much of the morbidity of cancer in women is preventable in a practical sense.

We know very little about the actual prevention of malignancy. Three separate etiologic factors have been related to gynecologic cancer. The oldest of these is the trauma of child-bearing to the cervix with its consequent lacerations, erosion and infections. This suggests itself as an attractive theory, especially from the fact that the great preponderance of cervix cancer occurs in women who have borne children in contrast to those who have not—a ratio of about 10 to 1. However, the concept that these benign cervical lesions are precursors of malignancy is easily challenged, both on pathological and statistical evidence.

Recently it has been shown that there may be a relationship between poor penile hygiene and carcinoma of the cervix. The comparatively low incidence of cervical cancer among women of Jewish origin and other groups that practice ritual circumcision has raised some interesting speculation in this field and provides enthusiastic argument for routine circumcision as a preventive measure. However, the data in support of this thesis is almost entirely statistical. The only experimental evidence I know is that horse smegma seems to contain a carcinogen.

A third etiological factor that has been related to uterine cancer is the growth stimulating potential of the estrogens. Perhaps the most suggestive evidence of this type, so far, is the high incidence of endometrial cancer found in co-existence with granulosa cell tumors. These granulosa cell tumors are of the feminizing variety and secrete estrogen. In the reported cases of granulosa cell tumors the incidence of co-existing endometrial cancer is from three to four times greater than would be expected in a similar age group. Evidence of this type has been used to indict the estrogens as carcinogens, and until there is more data the careful physician will limit the use of this hormone.

In the field of cancer prevention much of what the gynecologist can do is related to the more practical consideration of detecting early lesions. The vaginal cytological smear of Papanicolaou and Traut and the appreciation of the significance of the intraepithelial carcinoma have introduced new principles which have affected all aspects of therapy.

The vaginal smear in an efficient laboratory will detect cervical cancer in 90 per cent of the cases. Its value is all the more impressive when it is realized that the relatively slow growing intraepithelial cancer also exfoliates abnormal cells which may be detected in the smear. However both false negative and false positive results may occur, for which reason we must not depend upon a negative report where cancer is

D. A. D'ESOPO, M.D., *Attending Obstetrician and Gynecologist, Columbia-Presbyterian Medical Center; Professor of Clinical Obstetrics and Gynecology, Columbia University, New York.*

Presented at the First Interstate Scientific Assembly of the Medical Society of the District of Columbia and The Medical Society of Virginia, Washington, D. C., November 1-3, 1954.

suspected, nor accept a positive smear as evidence of cancer without confirmatory evidence from the pathologist.

The relationship of intraepithelial cancer to invasive cancer is of considerable importance in this subject. The collected evidence indicates that intraepithelial cancer is potentially invasive and, if untreated, may progress to clinically evident cancer of the cervix. What we do not know is how frequently it becomes invasive cancer. All cases do not become overt carcinoma and, indeed, some have shown regression. However, this should not permit leniency in the treatment of these lesions in view of their proven potential for real trouble.

The rate of growth of the intraepithelial carcinoma is slow. Therefore, it is believed that if a patient, who will ultimately develop an invasive cancer, is studied during the five years preceeding the development of clinical symptoms, the smear followed by a biopsy will very likely give evidence of an intraepithelial carcinoma with the prospects for a complete cure. The slow rate of growth of these lesions has other clinical implications. It gives us time to study the patient carefully, without hurry. It permits waiting in pregnancy until the child is born when more biopsies may be obtained.

We may summarize our present approach to the detection of gynecologic cancer in the following way: If there is no cervical lesion and no unusual bleeding, negative cystological evidence is sufficient; if there is a cervical lesion without symptoms, a negative smear and a negative circumferential biopsy is required (punch biopsies miss about one-fifth of the positive lesions); if there are symptoms of intermenstrual or post menstrual bleeding, then we should insist on having the combined evidence of smear, cervical biopsy, and curettings.

Before dismissing the subject of early cancer detection, it should be pointed out that there is need for more emphasis on the training of medical students to appreciate that the bimanual pelvic examination is an essential part of the complete physical examination and that it should be done routinely rather than on the basis of symptom directing leads.

The pelvic examination is not the exclusive prerogative of the gynecologist. While the specialist may be required to substantiate or interpret pelvic findings and carry out technical diagnostic and therapeutic procedures, the bimanual examination and visualization of the cervix should be looked upon as part of general practice.

The fault lies with both patient and doctor. The woman is inhibited, reticent and shows deeply ingrained reactive attitudes that stem from her very early training. The physician is reluctant, hurried, or just indifferent. Studies carried out to show the factors concerned with the causes for delay in the treatment of cancer bring out these faults, the physician being completely or partly involved in about one-third of the neglected cases.

It should be recognized by the profession that the great emphasis placed on the detection of early cancer has made women accept the pelvic examination as part of good practice even if it conflicts with their inward sense of modesty. So much could be done along these lines by our teachers of medicine—both under-graduate and post-graduate—and the kind of publicity that would lead women to expect this kind of an examination from the doctor who is doing a first-class job.

Any discussion of preventive gynecology would be incomplete if it did not include the relationship of obstetric management to subsequent gynecologic lesions.

That many of the conditions requiring gynoplastic procedures follow poor obstetric management is attested by all gynecologists, and especially by those who have practiced the specialty in the broader sense of having shared the responsibility for the trauma of child-birth.

The fascias of the pelvis at best represent a compromise between their ability to support and their quality of yielding gracefully under the impact of labor. This nice balance is not always attained. Some women have poor fascial structures and even the most ideally conducted labor and delivery will result in considerable loss of pelvic support. While there are exceptions, the original thesis still holds that ideal obstetric management can prevent most of the lesions that are related to structural anatomical changes in the supporting tissues.

In this connection, it is noteworthy that the trend is away from the difficult operative vaginal delivery toward abdominal section. It may be predicted here that the time is not too far off when good obstetric practice will demand that, when every opportunity has been given the woman to deliver herself and she fails to do so, major interference will be carried out by the abdominal rather than the vaginal route. It will be a policy of conservatism in the management of the vaginal delivery mixed with a liberal attitude in the use of the cesarean section.

As another very important prophylatic obstetric procedure I should like to stress the value of the

episiotomy. The episiotomy is not merely a means of substituting a precise surgical incision for what might have been a jagged tear. It does much more than that. It avoids excessive stretching of both the levator sling and the anterior vaginal wall with its contained pubo-cervical fascia that supports the urethra and bladder neck. In this way it aims to prevent both the rectocele and cysto-urethrocele. To accomplish this, the episiotomy must be done early, when the presenting part begins to appear at the outlet, before there has been any considerable distension of these structures.

During the post-partum period the obstetrician has the opportunity to treat many of the benign lesions of the cervix. So often we see patients with erosions and cervicitis that have been treated for long periods with tampons, suppositories and douches with no real curative results. Worse, they are sometimes treated with substances like silver nitrate which cause a layer of squamous epithelium to grow over an erosion while the cervical glands beneath remain active. The glands continue to function and, having no outlet, many large Nabothian follicles are formed. The chronic infection remains and the cervix becomes hypertrophied with deposition of fibrous tissue. A chronically infected cervix of this type causes vaginal discharge and may cause chronic pelvic pain.

The high frequency cautery is so simple to use in the treatment of these lesions and so effective that it should be employed to the exclusion of any other form of therapy. Apart from the excellent therapeutic results obtained in this way, it is my own belief that the use of the cautery for the treatment of even the slightest lesion of the cervix will sometimes destroy the very earliest focus of an intraepithelial carcinoma, for it has been shown that by far the most frequent site of the intraepithelial cancer is at the squamo-columnar junction, an area that is always attacked by the cautery when erosions are treated. It has been stated previously that the trauma of childbirth is not considered an etiological factor in cervical cancer, but it is reasonable to believe that the meticulous treatment of these lesions may well have the effect of prophylactic therapy.

Another aspect of this subject that I would like to present deals with the prevention of morbidity from unnecessary gynecological operations.

All specialties at some time or other in their development have been guilty of advocating unnecessary operations. This has been learned retrospectively, in the light of new knowledge and continued experience. I am naive enough to believe that poor judgment and incomplete training, rather than greed, account for the unnecessary operation. At times operative intervention seems to be the hastily thought out therapy of the surgeon that is the counterpart of the pill or the "shot" that is given by his medical confrere.

In gynecology we have been at fault, too. Suspension of the uterus still constitutes one of the common gynecologic procedures in some hospitals, yet rarely does this condition cause symptoms unless it is associated with structural defects of the pelvic supports. When suspension of the uterus is done alone or with the usual appendectomy, it is generally unjustified.

A great variety of vaginal plastic procedures are performed. Many of these presenting minimal or even moderate degrees of cystolele, rectocele or uterine prolapse are unnecessary. Such conditions may remain static and never cause symptoms later on. Too often these patients are psychoneurotics with pelvic focalization of symptoms and are referred to us by the internist after his thorough examination has proved negative. By loose thinking the pelvic findings are related to the patient's complaints, and surgery is advocated. A follow-up, in our clinic, of patients operated upon for even moderate degrees of deficiency of the pelvic supports, reveals that, after a short period of improvement, many return with either the same or new complaints. Some of them have later proved to be true psychotics. Obviously, these patients should be more completely screened and many should be treated psychiatrically—not surgically. They suffer from anxiety-tension states and in their retreat from their problems are ready to accept the willing hand of the surgeon.

Then there is the matter of the unnecessary hysterectomy. Here we are dealing with another facet of the problem—the prevention of cancer. It may be worth doing a dozen or two hysterectomies in order to prevent one case of cancer. Our thinking about this problem is in a transitional state because we do not know how often intraepithelial carcinoma becomes an invasive lesion or how often adenomatous hyperplasia becomes endometrial cancer. We will need more experience before principles of treatment become crystallized. In the meantime, we will tend to be radical because the hysterectomy is relatively safe, while the sad, beaten down, hopeless countenance of the doomed cancer patient is so haunting.

One type of hysterectomy that does fall into the discussion of unnecessary procedures is the hysterectomy for fibromyomata when these are small and asymptomatic. Fibroids should not be removed

unless they are causing excessive bleeding or pain, which is rare, or reach the size of a three months' pregnancy, or present sufficient doubt in the diagnosis to make conservatism an unjustifiable hazard.

In the field of pelvic infections we note a marked diminution. A generation ago gonococcal infections were an important part of gynecological practice. To-day they are hardly ever seen except in the gynecological services of large city hospitals.

This is not due entirely to antibiotics, for the reduction started before these drugs were available. The diminished incidence of these infections began when the patient was made to appreciate the great value of rest, avoidance of sexual contacts and douches during the acute stages of infection and the physician to understand that the less he did in the way of active treatment the better his patient got along.

With the introduction of the antimicrobial agents, the effect has been curative in practically all instances when the infection is localized to the urethra or cervix. The rapid elimination of these initial sites of infection has likewise reduced the incidence of salpingitis, 75 per cent of which is reputedly due to gonococcus.

When the disease involves the tubes, with the formation of the characteristic tubo-ovarian abscess, the effects of antibiotic drugs are not so dramatic and they have no effect whatever on chronic or residual salpingitis. Perhaps these drugs would be of greater value in the initial stages of tubal infections but in actual practice the patients are not seen at this time. In spite of the fact that antibiotics do not appear to alter appreciably the course of these well established cases of acute salpingo-oophoritis, they are still of value in sterilizing foci of infection in the lower genital tract and in this way prevent later re-infection.

The important point in a prophylactic sense about these infections is to stress the need for early diagnosis and treatment of the initial infection when the organisms are confined to the structures outside the peritoneal cavity, at which time complete cure is possible.

In summary, we stress that the early diagnosis of pelvic cancer ranks first in the field of preventive gynecology. It is with early lesion that much can be done. To this end we should continue the active campaign of creating an awareness of this problem without intimidation. The profession, on the other hand, must make full use of the four basic diagnostic tools—the bimanual examination, the Papanicolaou smear, the cervical biopsy and curettage. These are the means of early diagnosis. To what extent they may be applied in a screening program is a matter of economics. The bimanual examination, however, is the first line of defense, and our teachers of medicine should stress its importance as part of the routine physical examination.

Better obstetrics is being done each year. A policy of practical conservatism in the management of the vaginal delivery mixed with a liberal attitude toward the abdominal section will give us still better results. With ideal obstetrics the incidence of anatomical defects of the pelvic supportive structures can be reduced practically to the vanishing point.

As part of good obstetric management we stress also the importance of efforts to restore normal anatomy to the cervix both immediately after the birth of the child when the cervix should be inspected and repaired, if necessary, and during the post-partum period when persistent efforts should be made by positive therapy, such as electro-coagulation, to eliminate the erosions and infections.

Pelvic infections are diminishing in number due to the exclusive use of antibiotics rather than local therapy. Surgery is rarely indicated. If we treat the patient with the aim of eliminating foci of infection in the lower generative tract, we may well avoid re-infection which seems to be the cause of the incapacitating chronic or residual salpingitis.

Unnecessary gynecologic operations continue to be a source of much contention. These are more often performed in the smaller private hospitals rather than the voluntary hospital where there is better standardization of indications and organization of the surgical departments. Many of these operations are done by surgeons who, not infrequently, seem to have a better knowledge of technics than they have of gynecologic physiology and pathology, and the psychosomatic implications of pelvic symptoms.

Dangers of Blood Transfusions

AMBROSE G. HAMPTON, JR., M.D.,
CHARLES L. CROCKETT, JR., M.D.,*
BYRD S. LEAVELL, M.D.,
Charlottesville, Virginia

THE availability of whole blood for transfusions has led to the increased use of this important therapeutic procedure in recent years. There is no question that in many instances the administration of blood has been life saving. However, it appears that the ease with which blood transfusion can be given in most hospitals today has led to its use in many circumstances where it is not essential. At times physicians seem to overlook the fact that despite many technical improvements, the use of blood transfusion still involves definite risks. It is the purpose of this paper to review the background, dangers, and complications of blood transfusions. The dangers of blood transfusions are compared with the risk of some other procedures. The case histories of several patients in whom transfusion had unfortunate consequences are presented and discussed.

The early history of blood transfusion is a fascinating subject which has been summarized by DeBakey[1] and others.[2,3] The use of blood as a therapeutic agent dates back to antiquity. The Egyptians, the Greeks, and the Romans practiced the drinking of blood in the belief that it would restore health. Authentic references to blood transfusions cannot be found until the middle of the 17th century. It was not until the theory of circulation of the blood was propounded by William Harvey in 1616 that blood transfusion was considered possible. In 1656, Sir Christopher Wren may have promoted blood transfusion when he devised a method of administering drugs intravenously by the use of animal bladder to which two quills were attached. Credit for the first successful transfusion apparently belongs to Richard Lower, who transfused the blood of one dog into another. Several years later, in 1667, Lower transfused into "a mildly melancholy insane man" the blood of a lamb. This was mentioned in the diary of the famous Samuel Pepys as successful. The first authentically recorded successful transfusion on human beings was in June, 1667, at which time Jean Baptiste Denis transfused 9 oz. of lamb's blood into a youth. Following this procedure the boy made a remarkable recovery from an obscure fever. After several successful transfusions, Denis encountered a fatal hemolytic reaction in a man to whom he gave lamb's blood for his insanity. The patient had been transfused by Denis twice previously without untoward effects. Denis was charged with murder. Following a prolonged legal battle he was exonerated, but during the ten years that followed, the use of transfusion was forbidden by an edict of parliament and also by a papal bull.

The second era of activity in the field of blood transfusion began 140 years later when James Blundell, a London physiologist and obstetrician, devised an apparatus to aid in direct transfusion. He used this method in 1818 in ten cases of postpartum hemorrhage, five of which were successful. This caused a re-awakening of interest in blood transfusion and Landois, in 1875, wrote a comprehensive monograph which reported a total of 347 transfusions of human blood and 129 instances in which animal's blood was used. At that time the indications for transfusion were listed as: "the burnt, the uremic, the syphilitic, and the mad." However, an increasing number of severe reactions reinforced the belief that transfusion was hazardous. Infusion of physiologic saline solution was introduced about this time and because of its safety and efficacy the use of blood transfusion was largely abandoned until the turn of the century.

The third and modern era of blood transfusion began with what was perhaps the most important single discovery in its history. In 1900, Landsteiner[4] described the presence of iso-agglutinating and iso-agglutinable substances in human blood. The following year Landsteiner described three types of blood which he divided into groups according to their agglutinating reactions. Jansky, in 1907, described the reciprocal agglutinating reactions of four groups and classified them as O, A, B, and AB as we know them today.[4] Thus, the greatest danger of blood transfusion, that of incompatibility, was explained. The modern period has been devoted to the study of methods to facilitate the preservation and transfer

From Department of Internal Medicine, University of Virginia Medical School, Charlottesville, Virginia.
*Dr. Crockett's present address is Roanoke, Virginia.
Received for publication, November 26, 1954.

of blood. Numerous techniques of direct transfusion were used, but it was not until the introduction of sodium citrate as an anticoagulant in 1914 by Hustin in Belgium,[4] Agote in Argentina,[4] and Lewisohn[5] and Weil[6] in the United States that transfusion could be made really practical. Several years after the discovery of sodium citrate as an anticoagulant, Rous and Turner of the Rockefeller Institute published a dextrose-citrate method for the preservation of blood for transfusion.[7] This method was put to use promptly by Robertson, who conceived and operated the first blood bank in casualty clearing stations of the British Army in 1918.[8] It was not until 1936 that the first blood bank in the United States was organized at Cook County Hospital in Chicago by Fantus.[9] Today almost every hospital in the country has its own blood bank.

In present practice the use of blood transfusion has increased markedly. This was indicated by Moore,[10] who reported that in the Washington University group of hospitals, 2,700 transfusions were given the first year of operation of their blood bank in 1943, while in 1952 almost 8,000 transfusions were given. The number of transfusions per bed was calculated to have increased nearly 2.5 times. Many factors are responsible for this increase, such as a change in the character of surgery, which now includes more thoracic and cardiac operations, and a much more radical surgical treatment of carcinoma. Another factor may be the use of transfusion more often than is necessary because of its ready availability. This point has been emphasized in the recent literature.[10,11,12,13,14,15,16]

The general indications for transfusions are listed in Table I, which is adapted from Nicholson.[17] Hemorrhage, certain anemias, and some types of poisoning constitute a real need for transfusion in order to increase the oxygen carrying capacity of the blood. Clot formation and cessation of bleeding can be promoted by transfusions in most cases of hemophilia and in some instances of thrombocytopenia and hypoprothrombinemia. The use of transfusion as an immunological aid in combating infections is of doubtful value but it appears that some patients with debilitating diseases and anemia are benefited by transfusion, although the mechanism is not known.

Indications for Transfusion

1. Increase oxygen carrying capacity.
2. Restore blood volume.
3. Restore clotting mechanisms.
4. Correct hypoproteinemia.
5. Supply immune bodies? ? ?

Transfusions are not without risks, and this is best appreciated by comparison with other common procedures, as shown in Table II.[4,10,18,19,20] The incidence of all types of reactions is 34 per 1,000 transfusions and the number of deaths from transfusions is about the same as the overall mortality from anesthesia. Although much has been written about the danger of chloramphenicol as a cause of aplastic anemia, the risk of morbidity and mortality from its use is probably infinitesimal compared with that of blood transfusion.

Dangers of Transfusions Compared to Other Clinical Procedures

	Incidence (per 1000)	Procedure Mortality Rate (per 1000)
Transfusion Complications	(1)	(2)
1. Reactions (all types)	34	0.33-1.0
2. Hepatitis (homologous serum type)	(3) 5-8	(4) 0.0008
Other Procedures		
1. Appendicitis	--	(5) 6-8
2. Anesthesia (Overall)	--	(6) 0.64
3. Anesthesia, ether	--	(7) 1.2
4. Aplastic anemia from chloromycetin	(8) 0.00125	0.0005

(1) DeGowin, 1949. (2) Moore, 1952. (3) Ibid. (4) Ibid. (5) Hawk, 1952. (6) Beecher, 1954. (7) Ibid. (8) Harrington, 1952.

A classification of transfusion complications is given in Table III. Of the reactions, the most common is the pyrogenic type. The incidence has been reported as 1.8% in 1945 by DeGowin.[4] Reactions of this type are characterized by chills and fever without evidence of hemolysis. The etiology is uncertain. Carbohydrate bacterial products which are not destroyed by autoclaving[4] and bacterial contamination which occurred during drawing of the blood

Complications of Transfusion

1. Reactions.	2. Transmission of disease.
A. Pyrogenic.	A. Hepatitis.
B. Allergic.	B. Malaria.
C. Circulatory.	C. Syphilis.
D. Hemolytic.	D. Septicemia.
E. Sensitization to Subgroups.	

have been suspected. Most organisms cannot survive refrigeration, but may cause a febrile reaction even though non-viable.[21] Platelet and leukocyte antibodies have also been suggested as a cause of these febrile reactions.[22]

The second most common reaction is the allergic type. Hives, angioneurotic edema, and occasionally asthma may occur during or soon after the transfusion. Such reactions have been reported in 0.8% of 5,386 transfusions.[4] The etiology remains undetermined, but recent work suggests that it may be prevented by the use of an anti-histaminic at the time of transfusion.[23]

One of the most severe transfusion complications is that of pulmonary edema from circulatory overloading. The blood volume may be dangerously increased by the administration of blood, plasma, or even crystalloid solutions intravenously. This is especially hazardous in elderly persons, and in persons with known heart disease. No data are available from which the incidence of this complication can be estimated. Its occurrence, which is most likely to occur during or shortly after the transfusion, is an emergency situation. The first measure in treatment is the application of tourniquets to the four extremities. This has been shown to trap about 15% of the circulating blood in the extremities.[24] If the pulmonary congestion does not respond promptly to this simple measure and to appropriate drugs, an immediate phlebotomy should be performed with the removal of the volume of blood equal to that which was given by transfusion. This complication can be prevented by extreme caution in the administering of blood to elderly patients or those with heart disease. The use of packed red cells instead of whole blood is valuable in patients of this type because blood volume is not increased as much as with whole blood. The following case report is an example of this complication.

Case I. A white woman, age 57 years, was admitted with a history of fever and aching pain in the extremities for one week. She had had rheumatic heart disease with mitral stenosis since childhood and was on digitoxin for congestive heart failure. Examination on admission showed a temperature of 99.2°F. and blood pressure 170/80. She appeared chronically ill. The heart was enlarged and the rhythm irregular. Murmurs typical of mitral stenosis and insufficiency were present. The liver was palpable four finger breadths below the right costal margin and the spleen was slightly enlarged. There was no edema. Her hematocrit was 34%, hemoglobin 11 grams, red blood count 3.62 million, white blood count 11,300 and sedimentation rate 30 mm. at the end of one hour. Urinalysis showed some albumin and white blood cells but the culture was negative. Eight blood cultures were sterile. Blood urea was 36 mg.%. An electrocardiogram showed auricular fibrillation, digitalis effect, and left ventricular strain. Cardiac fluoroscopy showed enlargement of the left and right ventricles and left auricle. The patient was studied thoroughly for suspected bacterial endocarditis. After study was complete, on the 12th hospital day, she was given a blood transfusion because of her anemia. She had received 600 cc. when she became dyspneic and rapidly progressed to severe pulmonary edema. She vomited, began to cough, became cyanotic and developed many moist rales in her lungs. She was treated with oxygen, intravenous aminophylline, morphine, and rotating tourniquets. Eight hours later she was still quite dyspenic and a phlebotomy was done. After 250 cc. of blood had been withdrawn she improved and was out of the oxygen tent by the next day. She was discharged after an uneventful recovery.

Comment: This case illustrates well two points. First, the indication for transfusion was doubtful because blood was given for a borderline anemia to a patient with known heart disease and mild congestive failure. Second, after the development of pulmonary edema, 12 hours elapsed before the patient was finally relieved by phlebotomy.

The hemolytic transfusion reaction has been studied more extensively than any other type, but much about it remains unknown. Clinical evidence clearly shows that some element from hemolyzed red blood cells is toxic when it is present in the circulation in sufficient amounts. It seems likely that free hemoglobin is the toxic substance, since the intravenous injection of 10 grams to 50 grams has produced typical symptoms of hemolytic reactions such as chills, fever, back pain, and a sense of constriction in the chest.[4] After such injections, 12% to 30% of the hemoglobin is excreted in the urine, while some is converted to bilirubin within 6 to 8 hours. Hemoglobin circulating in the plasma over this length of time is converted to methemalbumin, which may be detected spectroscopically in the plasma for over 24 hours. The causes of hemolysis may be conveniently classified as extravascular and intravascular.

Extravascular hemolysis occurs from improper handling of the donor's blood and may result from such errors as freezing, heating, and improper storage. Intravascular hemolysis refers to the rupture

of the erythrocytes in the circulation of the recipient. It may be due to incompatible hemolysins in the recipient's plasma, incompatible isohemagglutins in the recipient's plasma, or incompatible antibodies in the donor's plasma. The incidence of hemolytic reactions is difficult to determine. These reactions are rare but a certain number are probably inevitable because of human error. The reactions are usually characterized by pain in the flanks, substernal constriction, chills, and fever, that occur during or shortly after transfusion. Hypotension may be present for a few minutes or for more than 24 hours. If a hemolytic reaction is suspected, blood should be drawn immediately and allowed to clot. Hemoglobinemia is usually demonstrated by the presence of a reddish color to the serum.[22,25] Six to twelve hours after transfusion the serum bilirubin level may be elevated. Hemoglobinuria will occur within a few minutes after the hemoglobin level in the blood plasma has reached the renal threshold, and may continue for as long as 36 hours. A minority of the patients with hemolytic transfusion reactions develop signs of renal insufficiency. The exact cause of renal failure is not clear. Apparently it is not due to the hemoglobinemia *per se*. However, free hemoglobin in the plasma can cause a fall in blood pressure.[4] It has been postulated that this period of shock causes renal ischemia, which then results in precipitation of hemoglobin in the tubules. This concept has been strengthened by the work of Yuile,[26] who found that rabbits could tolerate large amounts of hemoglobin intravenously, but often developed typical hemoglobinuric nephrosis if the kidneys had been previously damaged by a brief period of ischemia. Serious renal damage is not frequently observed in adults with hemolysis of less than 200 cc. of blood.[4] Occasionally a patient will receive much more and survive.[22] An example of a hemolytic reaction with recovery follows.

Case II. A 37 years white female was admitted for a second stage thoracoplasty, sixteen days after an uneventful first stage procedure. The examination revealed physical deformity of the left chest from the previous operation. Her hemoglobin was 13 grams and red blood count 4.5 million. The leukocyte count was 5,300 and the differential count was normal. The urinalysis was normal. In the operating room the following day the thoracoplasty proceeded uneventfully and she received 500 cc. of O positive blood without untoward reaction. On her return to the ward she was given 500 cc. of O positive blood and then a second bottle of blood was started. One-half hour later she developed cyanosis, dyspnea, and an oppressive sensation in her chest. Then it was discovered she had received 200 cc. of incompatible type A Rh positive blood. She had a fever of 101°F. and chills. Her blood pressure remained at 100/60, where it had been since her operation. An immediate blood specimen revealed hemoglobinemia and a catheterized urine showed hemoglobinuria. She was treated with oxygen and given 5% glucose in water intravenously. Her urinary output remained good although the following day her blood urea was 53 mg.% and hemoglobin 11 grams. Her icterus index was 150 approximately 18 hours after her incompatible transfusion. Hemoglobinuria persisted for three days but her urea fell to 20 mg.% by the fourth day. Her hemoglobin also fell to 7 grams, red blood count to 2.9 million, and hematocrit 30%. She was given one unit of O positive blood on the fourth post-operative day and the hemoglobin rose to 11 grams and hematocrit to 38%. Her serum electrolytes were normal during her post-operative course and by her fifth post-operative day the icterus index was 5. She improved rapidly and was discharged one week following the transfusion reaction.

Comment: This case illustrates a typical hemolytic reaction with recovery. Although she was seriously ill at the onset, her urinary output remained good for the duration of her illness. The hemolysis during the reaction lowered her blood to the point where she required another transfusion prior to her discharge. Her treatment followed the current trend used in any acute tubular nephrosis. An attempt is made to maintain urine secretion during the first few hours, without the addition of sodium, by giving 5% glucose in water. Overhydration should be avoided. If anuria develops, fluid replacement should consist of glucose in water in amounts equal to the known output plus 1,000 cc. for insensible water loss. Serum electrolytes should be followed so that repair solutions can be given if necessary.[27] Current work with the hemolytic reactions in both man and dog leads to the belief that alkali is not helpful. Usually the kidney will secrete an alkaline urine after hemolytic reactions even if alkalinizing agents are not given.[22] If there is oliguria, the sodium may be retained in the body and for this reason administration of large amounts of sodium bicarbonate may cause edema.

Another type of transfusion reaction is that caused by sensitization to subgroups. This problem has been recognized since the discovery of the Rh factor and

has become more complex since the advent of the Kell, Duffy, and many other factors. The incidence of isosensitization as a complication of blood transfusion is impossible to determine since it will not appear in any series of immediate transfusion reaction. It may first become manifest years later as a hemolytic reaction to subsequent transfusions or as the occurrence of hemolytic disease of the newborn. Many blood banks have discontinued the saline matching method as unreliable. Some incompatibilities that cannot be demonstrated by cross-matches in saline are shown by using a serum medium. All doubtful cross-matches, or those of patients who have had previous transfusions, should also be checked with the Coombs test.[13,14,16] Two types of sensitization are shown in the following case reports.

Case III. A 68 years old white female was admitted to the hospital for the 18th time. A diagnosis of aplastic anemia had been made several years previously and she had received 82 blood transfusions before admission. Hepatosplenomegaly had been developing since her first transfusions. She had noted weakness and dyspnea for one week prior to admission. The examination showed the liver to be enlarged 8 cm. below the right costal margin and the spleen 5 cm. below the left costal margin. Her hematocrit was 18% and hemoglobin 4 grams. She was given five transfusions without reaction, but on the sixth transfusion she developed a typical hemolytic reaction with fever, chills, chest pain, hemoglobinemia and hemoglobinuria. The following day she was jaundiced and the icterus index was 40 units. The bottle of blood which caused the reaction was found to be incompatible by the Coomb's test and later studies by the Blood Bank showed that the patient was Kell negative and had developed an anti-Kell factor. Recovery from the reaction was uneventful.

Comment: This patient illustrates the development of an intragroup sensitivity which resulted in a hemolytic reaction. This case is also typical in that such complications usually occur in those patients who need the most transfusions such as those with aplastic anemia and hemophilia. Future blood-matching is made more difficult since this type of patient occasionally develops multiple antibodies.[13]

Case IV. This 17 month old Negro male was admitted with tenderness and swelling of the right forearm of five days duration. Sickle cell anemia had been diagnosed when he was seven months old. He had been admitted once previously for transfusion. He was a pale infant with slightly distended abdomen and hepatosplenomegaly. The right forearm was swollen and tender. The hemoglobin was 6 grams, red count 2.7 million and white count 15,000. The sickling test was positive. X-ray of the hands and arms showed rarefaction and periosteal reaction about the fifth right metacarpal and the first left metacarpal which were considered due to sickle cell anemia. Although the patient was Group O, Rh negative, he received three transfusions of approximately 170 cc. each of Group O, Rh positive blood before the error was discovered. He suffered no untoward reaction, but a check by the Blood Bank three years later revealed that he was sensitized to $Rh_0(D)$ blood with an anti-$Rh_0(D)$ titer positive in 1/256 dilution.

Comment: This patient is one who will probably need transfusions throughout life. Through an error he is sensitized to Rh positive blood and another mistake could easily prove fatal. This same error would be even more unfortunate in females.

The transmission of disease is another important danger of transfusions. The most common of diseases that is tranmitted is hepatitis of the homologous serum type. It typically occurs 56 to 104 days after the administration of whole blood or plasma. It has recently been reported to occur in 0.45% to 1.0% of whole blood transfusions.[28] With the use of pooled irradiated dried plasma, the incidence may reach 9.3%.[29] A recent study on wounded soldiers from Korea reported a surprising incidence of serum hepatitis of 3.6% from whole blood alone, and 21.9% from whole blood and plasma.[30] An instance of hepatitis transmitted in this fashion is shown below.

Case V. A 51 year old white female had been discharged from the hospital nine weeks prior to this admission following a month's stay with Rocky Mountain spotted fever. She had been severely ill and had received two units of whole blood and six units of plasma because of shock. One week prior to this admission she developed weakness, nausea and vomiting. A few days before admission she noted dark urine and jaundice. Examination at the time of admission revealed jaundice and an enlarged liver which extended three finger breadths below the right costal margin. Her hemoglobin was 12.5 grams, hematocrit 38%, and white count 5,500. Urinalysis showed 3 plus bilirubin but no urobilinogen. Her blood urea was 16.mg.% and her liver function tests on admission revealed a total protein of 5.9 mg.% and A/G ratio 3/2.9. Cholesterol was 234 mgm.%, alkaline phosphatase 4.1, icterus index 75, Van den Bergh direct positive and the total measured

11.7 mg.%. The prothrombin time was 18 seconds with a control of 15 seconds. Bromsulphalein retention was 47% in 30 minutes. Hanger's flocculation was 2 + and thymol turbidity 2.8 units. A review of her old hospital record revealed that she had received plasma 65 days prior to the onset of her symptoms. She was thought to have homologous serum jaundice and she was treated with a high caloric diet and vitamins. She gradually improved and the liver function tests at the time of her discharge two weeks following admission revealed an icterus index of 14, alkaline phosphatase of 4.6, thymol turbidity of 2.2 units, Hanger's flocculation 1 + and normal prothrombin time.

Comment: This patient made an uneventful recovery from hepatitis which occurred following the administration of plasma and blood, necessary in the treatment of Rocky Mountain spotted fever. The prevention of hepatitis of this type presents a very difficult problem. The virus has been recovered from the blood of patients as long as 87 days before the onset of clinical hepatitis.[31] The duration of the carrier state remains unknown but may persist for years in some individuals.[32]

Other diseases which may be transmitted by transfusions are malaria and syphilis. Malaria that is transmitted by this way becomes apparent from 5 to 30 days after transfusion. Most cases of this type are due to Plasmodium vivax. The prophylaxis of transfusion malaria is unsatisfactory because there is no method to make malarial blood safe for use, although plasma from infected blood is probably safe after five days storage at −20°C.[33]

The transmission of syphilis by transfusions during the period of spirochetemia has also been reported. The diagnosis is difficult because there is no chancre and the incubation period lasts from 1 to 4 months. Serologic tests for syphilis will not reveal all donors who have the disease because the blood of the donor recently infected can transmit the organism before the serologic tests become positive. Probably the best preventive measure against transmission of syphilis by transfusion is the employment of preserved blood, because it has been found that Treponema pallidum cannot survive storage at 4°C. for 96 hours.[33]

Occasionally a patient will receive a bottle of grossly contaminated blood which produces a massive bacteremia and death. The common organisms which might cause pyrogenic reactions[21] do not survive refrigeration. A few bacteria, however, especially the Gram-negative non-spore-forming enteric bacilli, grow readily at 4°C. and have caused fatal reactions.[34] It is fortunate that this complication is unusual, because the prognosis is poor, even with the antibiotics therapy now available.

Another problem which is seen only rarely is hemosiderosis, following multiple tranfusions.[35,36] This has been clearly defined recently, in order to separate it from hemochromatosis.[36]

The complications discussed thus far represent risks due to technical difficulties in blood transfusion. More distressing are those which arise through misused or unnecessary transfusions. One of the more common misuses is in patients with undiagnosed anemia, as is illustrated in the following case report.

Case VI. A 61 year old white male was admitted with an 18 months history of weight loss and anemia. He had been treated with iron and liver without effect. A year before admission he had a prostatectomy for benign hyperplasia in another hospital, after receiving five tranfusions for anemia. Examination at the time of admission showed a very pale, weak, sallow, elderly man. There was an ill-defined right lower quadrant mass. His hematocrit was 19%, hemoglobin 4 grams, red count, 2.4 million, white count 11,000. The reticulocyte count was 8%, MCV 78.7, MCH 15.6, MCHC 19.7. Stool examination showed 4 + benzidine. A barium enema showed a deformity in the cecum and ascending colon. Chest film was normal. He was given seven units of blood and transferred to surgery for exploration A large fungating mass was found in the cecum. It was a grade II mucoid carcinoma and had metastasized to the regional nodes.

Comment: In this case, an undiagnosed anemia was first treated with iron and liver and then with transfusions, before elective surgery. No serious attempt to determine the etiology of the anemia was made. Urinary retention without uremia is not an acceptable explanation for anemia. A careful examination for a lesion that caused blood loss perhaps would have prevented the 12 months delay in detecting the carcinoma of the cecum.

The idea that blood transfusion acts as a "tonic" which will make patients feel better and get well faster, despite already adequate blood counts, has no sound basis. The idea may produce tragic consequences, as occurred in the case report below.

Case VII. A young male adult was referred for admission because of anuria. Two weeks before admission he had developed "flu" with chills, fever, myalgia, and general malaise. After five days, he appeared to be over the acute phase of his illness,

but as his recovery was gradual he was given a blood transfusion six days prior to admission. He received the entire pint of blood despite the development of chills and backache during its administration. The next day he became anuric, and was transferred to the University of Virginia Hospital for treatment. Physical examination showed a temperature of 100°F., blood pressure of 140/70. He was a pale young man with slightly distended abdomen, mild scrotal edema and 1 + ankle edema. His hematocrit was 34%, hemoglobin 9.5 grams, red count 3.5 million and white count 16,600. Blood urea was 120 mg.%, chlorides 98.3 meg./1, sodium 127 meq./1, and potassium 4.7 meq./1. The Coomb's test was negative and the electrocardiogram was normal. Chest film showed pneumonitis in the right lower lobe. Retrograde pyelogram on the left was normal. He was given nothing by mouth except concentrated glucose and/or peanut oil and treated with penicillin. He was given several blood transfusions during his hospital course. By the 14th anuric day when he had uremic frost, the blood urea was 494 mg.%, and the potassum was 8.1 meq./1.

He was placed on peritoneal lavage with symptomatic improvement. This was discontinued on the 19th anuric day because of edema at which time the blood urea was 321 mg.%. Lavage was restarted on the 21st anuric day and the urea continued to fall. The patient developed abdominal pain and vomiting and expired on the 28th day of anuria.

Comment: This patient had a mild disease and was almost well until he was given a bottle of blood in the hope that it would speed recovery. Unfortunately, the risk of transfusion remains, even when the indication for transfusion is questionable.

Summary

The increased use of blood transfusion in recent years is one of the major advances in medicine. Knowledge of the various technical aspects of blood matching and blood transfusion has increased so that the risk is less today than it has ever been. When one considers the numerous steps that are necessary in the typing, cross matching, collection, storage, and administration of blood, it is not surprising that reactions still occur occasionally. It is a tribute to the state of our knowledge in this complex field and to the conscientious individuals who perform the necessary tests that complications occur so rarely. The operation of blood banks in hospitals and the collection of blood by the Red Cross have made the administration of blood easier for the clinician. Undoubtedly many lives have been saved. Many important surgical operations are possible only because of the liberal use of blood transfusion. However, the ease with which transfusion can be employed today appears to have given some clinicians a false sense of security. Transfusion remains a major procedure which carries definite risks under the best circumstances. Blood transfusion should be given only when the risk of failure to use it is greater than the risk of the many complication which may arise from its use. Transfusions given to patients with undiagnosed anemia or as a "tonic" during infection are rarely justified. Their use before and during surgical procedures should be a matter for decision in the individual case and not a routine treatment. Even though it happens rarely, a fatal reaction is a major calamity whenever it occurs. It is tragic when it follows an unnecessary transfusion.

Bibliography

1. Kilduffe, R. A., and DeBakey, M: The Blood Bank and the Technique and Therapeutics of Transfusion. C. V. Mosby, Co., St. Louis, 1942, pp. 1-45.
2. Editorial: Blood Banks. Virginia M. Monthly, 78: 275, May, 1951.
3. Wedgwood, R. J., and Riese, G. R.: Touching a Cure of an Inveterate Phrensy by the Transfusion of Blood. New England J. Med. 248: 902, May 21, 1953.
4. DeGowin, E. L.; Hardin, R. C., and Alsever, J. B.: Blood Transfusion. W. B. Saunders, Philadelphia, 1949, pp. 1-5, 266-299.
5. Lewisohn, R.: A New and Greatly Simplified Method of Blood Transfusion. Med. Record, 87: 141, 1915.
6. Weil, R.: Sodium Citrate in the Transfusion of Blood, J.A.M.A., 64: 425, 1915.
7. Rous, P., and Turner, J. R.: The Preservation of Living Red Blood Cells in Vitro. J. Exper. Med., 23: 219, 1916.
8. Robertson, O. H.: Transfusion with Preserved Red Blood Cells. Brit. M. J., 1: 691, 1918.
9. Fantus, B.: The Therapy of Cook County Hospital: Blood Preservation. J.A.M.A., 109: 128, 1937.
10. Moore, C. V.: Medical Problems Created by a National Blood Program. J.A.M.A., 149: 1613, August 30, 1952.
11. Straus, B., and Torres, J. M.: Use and Abuse of Blood Transfusion. J.A.M.A., 151: 699, February 28, 1953.
12. Editorial: Abuse of Transfusion Therapy. New England J. Med., 245: 745, November 8, 1951.
13. Vogel, P.: Current Problems in Blood Transfusion. Bull. New York Acad. Med., 30: 657, September, 1954.
14. Unger, L. J.: Dangers Associated with Blood Transfusion. New York State J. Med., 54: 1307, May, 1954.
15. Editorial: Blood Transfusion Dangers, New York State J. Med., 54: 1292, May, 1954.

16. Rath, C. E.: Hazards of Blood Transfusion. GP, 7: 67-74, June, 1953.
17. Nicholson, M. J.: Hemolytic Transfusion Reactions. Anesthesiology, 9: 345, 1948.
18. Hawk, J. C.; Becker, W. F., and Lehman, E. P.: Acute Appendicitis III. Ann. Surg., 132: 729, 1950.
19. Beecher, H. K., and Todd, D. P.: A Study of the Deaths Associated with Anesthesia and Surgery. Ann. Surg., 140: 2-34, July, 1954.
20. Harrington, W. J.: C.P.C. Am. J. Med., 13: 782, December, 1952.
21. Braude, A. I.; Sanford, J. P.; Bartlett, J. E., and Mallery, O. T., Jr.: Effects and Clinical Significance of Bacterial Contaminants in Transfused Blood. J. Lab. & Clin. Med., 39: 902, 1952.
22. Combined Staff Clinic (Mudge, ed.): Blood Groups and Transfusion Reactions. Am. J. Med., 16: 878, June, 1954.
23. Ferris, H. E.; Alpert, S., and Coakley, C. S.: Prevention of Allergic Transfusion Reactions. Am. Pract. and Digest Treat., 3: 177, March, 1952.
24. Ebert, R. V., and Stead, E. A., Jr.: The Effect of the Application of Tourniquets on the Hemodynamics of the Circulation. J. Clin. Invest., 19: 561, 1940.
25. Flink, E. B.: Blood Transfusion Studies. I Differentiation of Hemolytic and Non-Hemolytic Transfusion Reactions. J. Lab. & Clin. Med., 31: 1067, October, 1946.
26. Yuile, C. L.; Gold, M. A., and Hinds, E. G.: Hemoglobin Precipitation in Renal Tubules; Studies of Its Cause and Effects. J. Exp. Med., 82: 361, 1945.
27. Merrill, J. P.: Acute Renal Failure. G.P. 7: 55-62, June, 1953.
28. Neefe, J. R., *et al.*: Carriers of Hepatitis Virus in the Blood and Viral Hepatitis in Whole Blood Recipients. J.A.M.A., 154: 1066, March 27, 1954.
29. Murphy, W. P., Jr., and Workman, W. G.: Serum Hepatitis from Pooled Irradiated Dried Plasma. J.A.M.A., 152: 1421, 1953.
30. Sborov, V. M.: Giges, B., and Mann, J. D.: Incidence of Hepatitis Following Use of Pooled Plasma. Arch. Int. Med., 92: 678-683, November, 1953.
31. Neefe, J. R.; Stokes, J., Jr.; Reinhold, J. G., and Lukens, F. D. W.: Hepatitis Due to the Injection of Homologous Blood Products in Human Volunteers. J. Clin. Invest., 23: 836, 1944.
32. Stokes, J., Jr., *et al.*: The Carrier State in Viral Hepatitis. J.A.M.A., 154: 1059-1065, March 27, 1954.
33. Cantrell, J. R., and Ravitch, M. M.: Transmission of Disease by Transfusion of Blood and Plasma. Am. J. Med., 6: 345, March, 1949.
34. Borden, C. W., and Hall, W. H.: Fatal Transfusion Reactions from Massive Bacterial Contamination of Blood. New England J. Med., 245: 760, 1951.
35. Schwartz, S. O., and Blumenthal, S. A.: Exogenous Hemochromatosis Resulting from Blood Transfusions. Blood, 3: 617, 1948.
36. Kleckner, M. S., Jr.; Baggenstoss, A. H., and Weir, J. F.: Hemochromatosis and Transfusional Hemosiderosis. Am. J. Med., 16: 382, March, 1954.

Tuberculosis in Classrooms.

Despite sharp declines in tuberculosis incidence among children, outbreaks still can ocur, an editorial warns in the March 12 Journal of American Medical Association.

"When physicians, educators, public health personnel, and parents understand each other's responsibility for child health and are willing to work with each other, such tragedies as contracting tuberculosis in the classroom can be prevented. Teamwork also will permit the promotion of good health among children now in school."

A recent diagnosis of active tuberculosis in a 6-year-old girl led to the disclosure of three other infected first graders. Further investigation showed that their apparently healthy young teacher had the disease. The community where this occurred is now organizing for protection. Representatives of the local medical society, the health council, the parents-teachers association, the local tuberculosis association, and the school and health departments are working together.

"Few know that tuberculosis in a child makes him more liable to a more destructive form of the infection in later life. Yet tuberculosis is only one of the many problems of child health in which physicians and medical societies can be most productive when they work in close cooperation with the schools, health departments, parent groups, and voluntary agencies concerned with the health protection of children."

Chondromalacia of the Patella

JOHN S. THIEMEYER, JR., M.D., F.A.C.S.,
Norfolk, Virginia

THE term "chondromalacia of the patella" applies to a degeneration of the articular surface of the patella, as evidenced by softening, fibrillation with eventual fissuring, and erosion of the cartilage. Budinger, in 1906, is believed to be the first to describe this condition. Konig has been given credit for the first use of the term "chondromalacia patellae" in the literature (1924). The disease has been further described as "fissuring cartilage degeneration", "chondritis of the patella", "traumatic chondritis", "traumatic fibrillar degeneration", "traumatic degeneration of the articular cartilage", and "traumatic osteochondritis". The term "chondromalacia patellae" has been widely accepted and is being used almost exclusively in the literature to describe this disease.

Although chondromalacia of the patella has been recognized for forty years, there is still a lack of complete agreement among the observers as to the etiology. Trauma is believed to be a primary factor in the degeneration of the patella cartilage and was suggested by Budinger in 1906 and accepted by many of the early authors. However, in many occasions, a history of trauma could not be elicited. Aleman explained these cases on the assumption that the patient sustained minor injuries during childhood, which could not be recalled. These minor traumata were sufficient to break the smooth surface of the cartilage, which is known for its inadequate power of repair. The continuous wear and tear of the normally functioning joint further aggravated the damage. Other authors have agreed that, although trauma is the primary exciting cause, a predisposed constitution and the peculiar mechanism of the knee joint also play important roles in the formation of the degenerative changes found in chondromalacia of the patella. The similarity between chondromalacia of the patella and degenerative arthritis has been recognized by many observers. Konig (1928) suggested early resection of the degenerated cartilage as a means of preventing the development of degenerative arthritis. Erb, in 1933, reported a ten year follow-up of eighteen patients operated upon. He found that, although subjective improvement was noted in all patients, the *operation did not retard the further development of degenerative arthritis.* These results have been verified by other observers. The present most accepted theory is that degeneration of the patellar cartilage can exist with or without trauma.

A large number of pathological investigations have shown that degenerative changes are frequently found in the knee; these changes increase with age. Heine, in 1926, reported his observations in the examination of 1,002 cadavera of patients who died between the ages of 15 and 95. He found that the greatest number of degenerative changes occured in the knee joint. These changes occurred first in the patella and consistently reached their greatest development in this bone. In 49 per cent of these cases, the same degree of changes was evident in both knees; in 35 per cent, the condition was worse in the right knee; and in 15 per cent, the left knee showed the greatest damage. No sex difference was noted. The degree of severity of the involvement increased with age. In 1942, Bennett, Waine, and Bauer reported their study. They found that all joints obtained from individuals beyond the second decade of life, exhibited alterations similar to those observed in degenerative arthritis; and the degree of degeneration in the individual specimen was not proportional to the degree of arteriosclerosis found in the peripheral vessels. They concluded that articular cartilage remains normal for only a short time following complete maturation. In 1944, Hirsch found that normal cartilage could adapt itself functionally to an increased pressure with almost complete recovery of it elasticity, *provided the pressure per unit area did not exceed the tensile strength of the cartilage and was maintained for a short duration.* However, if the pressure did exceed the tensile strength, or was repeated often, or was maintained over too long a period, impairment of the elasticity resulted. Since he believed that the normal elasticity of the cartilage, and its resulting pumping action, was essential to its nourishment, he concluded that "nutritional disorders due to unfavorable loading may be one of the main reasons for pathologic changes in the cartilage of the patella". In 1945, Cox expressed the opinion that the true pathologic change was in the underlying

Read before the last annual meeting of the Virginia Orthopaedic Association at Norfolk, Va.
Received for publication, October 12, 1954.

cancellous bone, and that the change in the articular cartilage was entirely secondary. It can be seen from the above that the exact etiology is neither known, nor is there a favorite prevailing theory. To summarize the present trend of thought, we may list the following:

1. Our knowledge of the physiology and nourishment of cartilage is still incomplete.
2. Degeneration of cartilage without trauma does exist.
3. Acute trauma or static deformity can influence the origin and progress of the disease.
4. The question of constitutional disposition and heredity as etiological factors is still unsettled.

The relative incidence of lesions of the cartilage of the patella seen at arthrotomy is a matter of variability because of the resources and conditions under which the clinical material may be drawn. Peabody and Walsh found their incidence was about 20 per cent. Soto-Hall found 12 cases of chondromalacia in a study of 65 consecutive arthrotomies for an incidence of 18½ per cent. In this series the incidence was about 20 per cent. The condition is believed to be most common in young male adults. The average in our series was 24½ years, with the oldest patient being 50 years and the youngest patient 19 years. However, in the literature there are cases reported and verified as young as 17 and one proved case of 13 years of age has been reported. The earliest detectable lesions are most frequently located on the medial facet, less frequently in the center, and occasionally on the lateral facet of the patella. In severe cases, the entire articular surface may be involved.

The patella lies in one of the most exposed parts of the body. It has an extremely thick cartilage, the central part of which is poorly nourished. This predilection of the disease to these different sites has been explained by Wilberg on the basis of the peculiar anatomy of the patella femoral joint. He made cross sections and roentgenographic studies of knees at different angles of flexion. He was able to show that when the knee is flexed 20 to 50 degrees, the whole of the lateral facet and only a small part of the medial facet of the patella are in contact with the articular surface of the femoral condyle, whereas the greatest stress is on the central longitudinal ridge. As the flexion of the knee is increased, the pressure of the ridge diminishes, until at 90 degrees it disappears completely, for at this angle the patella reached the intracondylar notch of the femur. At this point, contact is maintained only by the larger lateral and the smaller medial facet. During the flexion, the lateral patellar facet continues in good congruence with the lateral femoral condyle, while the medial facet of the patella, from an angle of 90 degrees on upward, exposes a convex surface to the convex femoral condyle.

The pathologic changes found in cartilage of the patella have been described and studied by many investigators. J. Bonitsky, in 1947, in his review of the literature, gives the following summarization of the pathology: "In the early stage, the cartilage loses its bluish-white, shiny, translucent appearance and becomes opaque, yellowish and softer than normal. As the degeneration proceeds, cracks and fissures appear, which give a frayed appearance to the surface. With the continued progress of the disease, the cartilage is gradually ground down, until the underlying bone is exposed. The exposed bone soon becomes sclerotic and eburnated. In extreme cases, the entire articular cartilage will be denuded of cartilage. Marginal osteophytes have been shown to appear relatively early and develop in those areas where the degenerative regions have reached the cartilaginous edge. Frequently, the synovial membrane is secondarily involved and shows evidence of non-infectious inflammation. Very often a "mirror image" is found on the medial femoral condyle. The early lesions are featured by fibrillation of the superficial layer of the cartilage. The deeper adjacent layer is swollen, as revealed by its abnormal staining, and contains relatively few cells. The individual cells degenerate, increase in size, and are heaped together in small groups. As the clefts and fissures form, large cell clusters or lacunae of Weicheselbaum appear in the vicinity. The thickness of the articular cartilage is progessively diminished. The subchondral bone shows no conspicuous changes until the overlying articular cartilage has become markedly altered. When erosion extends for a considerable distance into the hyaline matrix, the marrow of the subchondral bone responds with various degrees of fibrous proliferation; fibrous tongues often extend through the zone of calcification. In close proximity to this newly formed fibrous tissue, there may be found cartilage and bone. Occasionally, an isolated mass of cartilage will be found in the marrow spaces of the subchondral bone."

The patient with chondromalacia of the patella usually has a long history of chronic knee complaint of various and sundry types for many years. In our series of 21 cases it was found that 48.5 per cent had a history of direct trauma. Four of the cases

had a past history of having sustained a fractured patella. We found in three of the cases, for a percentage of 13.5, that there was a history of a lateral clipping injury such as sustained in football. In eight of the cases, or 38 per cent, there was no history of any previous trauma. The most common symptoms present are listed below with percentages found in our cases.

	Cases	Per cent
1. Pain	20	95%
2. Swelling	15	71%
3. Instability	8	38%
4. Difficulty climbing stairs	7	33%
5. Locking	7	33%
6. Influence of weather	5	24%
7. Grinding (crepitation)	4	18%
8. Palpable loose body	1	5%

Crepitation of the patella has been emphasized as the most characteristic sign of this disease. Aleman stated that the location of the crepitation of the patella is pathognomonic. Carlson believed that an experienced examiner could make a diagnosis of chondromalacia of the patella on the basis of location, hardness, coarseness, and quantity of the crepitation. However, we have been able to demonstrate that degeneration of the patella cartilage can exist in the absence of crepitation. Thus, crepitation indicates cartilage degeneration, but the absence of crepitation does not rule it out, for effusion of the knee, which is often present, might separate the contacting surfaces. Aspiration of the effusion will usually show a clear fluid; seldom will it be cloudy. There is no evidence of infection, and occasionally pieces of cartilage will be found in the fluid. Roentgenograms are almost of no help in making diagnosis in the early stages. The evidence of osteophyte formation will verify the presence of degeneration of the articular cartilage, though, in a large number of cases even the osteophytes do not show up on the x-ray films. Often one, however, can detect free floating bodies or evidence of previous fractures of the patella.

There are very few absolute "physical signs" which are diagnostic of chondromalacia of the patella. The two most common signs are: (1) Pain on pressing or moving the patella by hand in the trough, and (2) Crepitation, either audible or palpable and usually subpatellar. This is accentuated by resisted quadriceps effort or by manual movement with or without pressure on the relaxed patella in the intracondylar trough. Our physical findings present in proved cases of chondromalacia are as follows:

	Cases	Per cent
1. Pain on moving the patella in the trough	11	55%
2. Patella crepitation	8	38%
3. Swelling	7	33%
4. Quadriceps atrophy	7	33%
5. Palpable loose body	4	18%
6. Limitation of motion of knee	2	10%
7. Limp	3	14%
8. Evidence of associated injury:		
a. Medial meniscus	4	18%
b. Fibular collateral ligament	1	5%

It was found that 10 of the cases recorded had had previous surgery. A listing of the previous types of surgery are as follows:

	Cases	Per cent
1. Menisectomy	3	14%
2. Patella shaved		
a. Partial	2	10%
b. Complete	1	5%
3. Surgery (type or reason unknown)	2	10%
4. Open reduction of fractured patella	1	5%
5. Synovectomy (for chronic synovitis)	1	5%
Total	10	49%

The complications of lesions of the patella cartilage warrant consideration as they have some bearing on the treatment, and are the following:

1. Quadriceps atrophy and weakness.
2. Chronic synovitis.
3. Joint laxity and secondary degenerative arthrosis.
4. Loose bodies from detached fragments of patellar cartilage.
5. Traumatic secondary attritional erosion of condylar articular surfaces.

Quadriceps atrophy and weakness are inescapable articular neuromuscular reflex responses. Since the knee joint is intrinsically weak and unstable and dependent to a major degree on this external muscular support, persistent and progressive quadriceps weakness leads to laxity and consequent joint deterioration, as well as to susceptability to traumatic degenerative arthritis. When the entire body is being supported by the lower extremities, such as on stair climbing or running, the pressure at the articular surface of the patella is tremendous. Under such conditions the rubbing of an irregular patellar cartilage surface can easily bring about scarring or the abrasion on the contacting articular cartilage of the femoral condyle, at the very point where, when the knee is extended, it should smoothly glide on the anterior horn of the meniscus.

Treatment may be outlined as follows:

A. Conservative:
   (1) Complete joint rest in phases of generalized joint reaction.

(2) Restriction of activity, such as stair climbing, running, kneeling.
(3) Medication. (This is usually without effect as articular cartilage is devoid of repairative powers sufficient to re-establish a normal surface.)

B. Surgical:
(1) Patella shaved
a. Partial
b. Complete
(2) Patella removed

Findings at time of surgery in this series are listed below:

	Cases	Per cent
1. Chondromalacia	21	100%
2. Mirrow image on medial femoral condyle	7	33%
3. Pressure of loose bodies	7	33%
4. Osteochondritis dissicans	4	18%
5. Chronic synovitis	3	14%
6. Associated medial meniscus injury	3	14%
7. Non-union of fractured patella with fibrous scar tissue throughout joint	1	5%

As to type of surgery, many authors state that if one is to do a chondrectomy, it must be complete, while others say that a partial chondrectomy, removing only the affected cartilage is all that is necessary. Also, there are many arguments, pro and con, as to whether a total patellectomy should be done in all cases of chondromalacia which are extensive. Of course, when there is a definite history and pathologic evidence of previous fractured patella with rough fragments within the joint, patellectomy is the treatment of choice.

Summary

Chondromalacia of the patella is of considerable clinical importance and is of high incidence among the mechanical causes of malfunction of the knee joint. In reviewing twenty-one cases, proved at surgery to have chondromalacia patellae, definite symptoms are present and have been listed in order of frequency. Also, specific physical findings are elicited, and these, too, are listed in order of frequency. Almost half of this series had had previous surgery, while at surgery, six other types of knee pathology were found in addition to chondromalacia patellae.

Bibliography

1. Aleman, Oscar: Chondromalacia Post-Traumatic Patellar. Acta Chir. Scandinavia, 63: 149-190, 1928.
2. Bennett, G. A.; Waine, Hans, and Bauer, Walter: Changes in the Knee Joint at Various Ages. New York, The Commonwealth Fund, 1942.
3. Bronitsky, Jacob: Chondromalacia Patellae. J. Bone and Joint Surgery, 29: 931-945, 1947.
4. Budinger, Konrad: Aber Ablosung Van Gelenkteilan and Verwandte Prozesse. Deutsche Etschr. F. Clair, 84: 311-365, 1906.
5. Cox, F. J.: Traumatic Osteochondritis of the Patella. Surgery, 17: 93-100, 1945.
6. Heine, J.: Aber die Arthritis Deformans. Virchows' Arch. f. Path. Anat., 260: 521-663, 1926.
7. Hirsch, Carl: Pathogenesis of Chondromalacia of the Patella. Acta Chir. Scandinavia, 83: 347-381, 1939.
8. Horwitz, Thomas, and Lambert, R. G.: Patellectomy in the Military Service. Surgery, Gyn. and Ob., 82: 423-426, 1946.
9. Konig, Fritz: Arthritis Deformans. Munchen Med. Wchnschr., 75: 32-35, 1928.
10. Kulowski, Jacob: Chondromalacia of the Patella: Fissural Cartilage Degeneration. J.A.M.A. 100: 1837-1840, 1933.
11. Peabody, Charles, and Walsch, Frank: Lesions of Patellar Cartilage as a Cause of Internal Derangements of the Knee. Archives of Surgery, 57: 589-598, 1948.
12. Soto-Hall, Ralph: Traumatic Degeneration of the Articular Cartilage of the Patella. J. Bone and Joint Surgery, 27: 426-431, 1945.
13. Wilberg, Gunnar: Roetgenographic and Anatomic Studies of the Femoropatellar Joint. Acta Orthopaedic Scandinavia, 12: 319-410, 1941.

Put AMEF Over the Top in '55

Now's the time for all good doctors to come to the aid of their medical schools. . . . Give generously to help the American Medical Education Foundation reach its 1955 goal of two million dollars for our nation's medical schools. Final count on the 1954 AMEF fund-raising drive totaled $1,182,627.08 from 22,996 individual contributors. This represents contributions from 11.22 percent of the medical profession as compared with only 8.89 percent in 1953.

This year the Foundation plans to step up its national direct mail campaign as well as to encourage more personal solicitations from state and county AMEF committees.

Maxillary Sinusitis in Children: Its Relation to Coryza, Tonsillectomy and Adenoidectomy

H. GRANT PRESTON, M.D.,
Harrisonburg, Virginia

THERE seems to be a great diversity of opinion as to the indications for and the results of the operation for removal of tonsils and adenoids in children. For the past 25 years the tendency towards conservatism has been marked. Possibly, we have swung too far and we should seek a place nearer the mid point between radical and conservative surgery.

Following Kaiser's[1] studies in 1931, the number of tonsillectomies done was greatly reduced. His findings of increased incident of colds, bronchitis and sinus trouble in children upon whom the operation has been done, were received as indications for conservatism. The recognized unsatisfactory influence of surgery on allergic patients has influenced the trend. In less degree, we may believe that the antibiotics have contributed to less tonsil surgery.

Griffith,[2] reporting on five thousand cases, found sinusitis more frequent in tonsillectomized children. Selkirk and Nutchel[3] found bronchitis and cough more prevalent in cases of children having had tonsillectomies.

Recently, Johnson and Watkins[4] pointed out that, in Kaiser's cases, which were taken from the clinic, there might have been nutritional disturbances contributing to failure of operative results. Also, they state that sinus infections are more likely to be sought out after tonsillectomy. In their study of 1000 circularized children, it was found that, in cases who were carefully selected as to indications, the incidence was reduced in upper respiratory infections, abdominal pains, bronchitis, sinus infection and impairment of appetite and nutrition.

From our studies we contend that many cases of suppurative sinusitis are overlooked in children upon whom T&A is indicated. We further believe that the incidence of the common cold and its sequella can be greatly reduced by adequate attention to the sinus disease at time of T&A.

Most of us have seen the dramatic relief obtained by the T&A operation in many cases, only to have our enthusiasm dampened by the utter failure to obtain results in others. In fact, we have seen cases in which it would have been better to leave the tonsils in. In an effort to arrive at a rational opinion of the problem in our own practice, we have undertaken to study a small group of children on whom tonsillectomy has been done. This being a preliminary study, we hope to add to the number as time goes on and thereby arrive at more definite conclusions.

Three types of cases have been studied by sending questionnaires and by case studies, namely:

1. Those having T&A operations without sinus disease.
2. Those having T&A operations and maxillary sinus lavage.
3. Those in whom simple T&A failed, but future sinus irrigation relieved.

A history of persistent obstructive symptoms, recurrent sore throats, colds with fever, and a relationship of acute tonsillitis to other recurrent conditions like otitis media, joint pains, etc., was obtained in most cases. The continuous appearance of large, cryptic tonsils, containing infectious material; injected pillars and persistent cervical adenopathy were signs usually depended upon as indication for T&A.

Patients who were candidates for the operation, giving a history of recurrent acute episodes of fever, cough and colds, with purulent nasal discharge, routinely had a P.A. x-ray of antra.

Fifty-two questionnaires were sent to the parents of those children in whom T&A alone seemed indicated. Many of these had x-rays of sinuses made, but not all. None were thought to be candidates for antrotomy.

CHART 1

T & A WITHOUT ANTROTOMIES—SELECTED AT RANDOM

52 Questionairs sent.
3.9% of 1480 T & A done over 5 yr. period.
36 or 69.2% replies
33 or 63.4% up to 6 yrs. inclusive.
19 or 36.5% over 6 yrs. (older than antrotomies)

Number colds first yr. after operations	23 or 63.9%	reported fewer.
	13 or 36.1%	reported as many before as after.

In the 5 year period of this study, 1480 T&A were done. The fifty-two cases of this group were chosen

Read before the Virginia Society of Ophthalmology and Otolaryngology, May, 1954.
Received for publication, December 13, 1954.

at random and represent 3.9% of the total T&A. There were 36 replies, or 69.2%. No grouping as to age was attempted but 33, or 63.4%, were 6 years or younger. The remaining 19, or 36.5%, were over 6 years and somewhat older than the antrotomy group to be discussed. All were asked if many or few colds were present before operation. They were also asked if there were few or many colds during the first year following operation. 23, or 63.9%, reported fewer colds following operation, while 13, or 36.1%, reported as many after as before surgery. This represents an apparent substantial reduction in incidence.

CHART 3

T & A CASES WITH ANTROTOMY

52 Questionairs sent.
38 Replies or 73%.
Age—35 or 67.3%—20 mo. to 6 yrs. inclusive.
17 or 32.7%—7 to 11 yrs. inclusive.
Antrotomies
3.9% of 1480 T & A done in 5 yr. period.
36 or 69.2% of the 52 cases—mucopurulent material in antral washings.
16 or 30.8% of 52 cases—clear lavage return.
38.4% had cultures reported.
45% of cultures showed no growth.
35%—Staph aureous.
10%—Strept non-hemo.
10%—Pneumos.

CHART 2

T & A WITHOUT ANTROTOMIES—SELECTED AT RANDOM (continued)

Fever prominent symptom of colds in 23 or 63.9%. Absent in 13 or 36.1%.	14 or 60.8% present before operation only. 6 or 26.1% present before and after operation. 3 or 13.1% present after operation only.
Cough prominent symptom of colds in 25 or 69.5%. Absent in 11 or 30.5%.	8 or 32% present before operation only. 17 or 68% present before and after operation.
Allergy reported present in 11 cases or 30.5%. Absent in 25 or 69.5%.	3 or 27.3% present before operation only. 3 or 27.3% present before and after operation. 5 or 45.4% present after operation only.

The question was then asked if fever was a symtom of colds before, and if present with colds the first year after operation. 23, or 63.9%, reported fever present, while 13, or 36.5%, denied its presence as a symptom. Of those reporting fever, 14, or 60.8%, stated its presence before operation only. 6, or 26.1%, admitted its presence before and after operation, while 3, or 13.1%, reported its presence after operation only. An apparently large reduction in fever as a symptom is attributed to the removal by T&A.

Cough as a symptom of colds before operation was admitted by 25, or 69.5%. It was absent in 11, or 30.5%. Of those with cough, 8, or 32%, were apparently relieved by T&A, while 17, or 68%, had coughs as a symptom of colds before and after operation. The relief of cough was not striking in this group.

Allergy was reported as present in only 11, or 30.5%, of the cases. 3, or 27.3%, reported allergy present before operation only. The same number of 3, or 27.3%, stated allergy was present before and after operation, while 5, or 45.4%, reported allergy present after operation only. In these 5 cases it is hardly likely that the operation caused the allergy, but its presence was brought to the parents attention. At any rate, the relief was anything but satisfactory in this group.

Of the 52 questionnaires sent to the parents of children whose x-ray studies indicated maxillary sinus disease and who needed T&A also, 38 replies, or 73%, were received. Thirty-five, or 67.3%, were 20 months to 6 years inclusive. 17, or 32.7%, were from 7 to 11 years inclusive. Again, this group represents 3.9% of the 1480 T&A cases operated upon over the 5 year period. 36, or 69.2%, of these children showed mucopurulent material in the antral washings. 16, or 30.8%, of this group showed clear returns from irrigation. This non-purulent return can, in part, be explained by the vigorous antibiotic treatment to prepare for surgery and in many cases to obtain an interim between colds so as to operate more safely. Also, many of these cases had a period of a month or more elapse between x-ray findings and the operation.

Unfortunately, cultures were reported on only 20 or 38.4% of cases. Of these, 45% showed no growth, 35% were staph. aureous, 10% strept. non-hemolytic, and 10% pneumococci. As stated before, all of these cases had had extensive treatment, over long periods of time, with many types of antibiotics, both parenterally and orally. This probably accounts for the large group producing no growth on cultures.

Of the 52 questionnaires to the T&A cases which had also undergone antrotomy, the number of colds in the first year after operation was reported fewer

in 31, or 81%, cases. 6, or 16%, reported as many before as after. 1, or 2.7%, reported more after operation. The incidence of colds was apparently markedly reduced by the combined procedure and the results were more favorable than in T&A alone.

Fever was reported as a prominent symptom of colds in 20 cases, or 52.6%, and was absent in 18, or 47.3%. 11, or 55%, of this number reported it present before operation only. 8, or 40%, admitted its presence before and after operation and 1, or 5%, stated it present after operation only. It had been thought that fever was more prominent in this group than simple T&A cases, but this is not borne out in this study. There is in both series, however, a very satisfactory apparent reduction in fever occasioned by the surgical procedure.

Cough as a prominent symptom of colds was reported in 28 cases, or 73.7%. It was absent in 10, or 26.3%. 9, or 32.1%, were present only before the operation, while 17, or 60.7%, stated it present before and after operation. 2, or 7.1%, stated it was present after operation only. Again, it was thought cough would be more frequently encountered in this group than in simple T&A, but, again, this was not borne out. It should be emphasized that the report is only on its presence after operation, not whether it was improved. At any rate, less satisfactory results were obtained in relief of cough by the procedure than expected.

Allergy was reported present in 11 cases, or 28.9%. It was absent in 27, or 71.1%. 3, or 33.3%, reported its presence before operation only. 6, or 60%, stated it was present before and after operation, while 2, or 20%, admitted its presence after operation only. Again, groups 1 and 2 parallel themselves in results and the relief of symptoms of allergy was only modestly obtained by antral irrigation. The improvement in general health and the likelihood of more satisfactory desensitization in the presence of bacterial allergy remain as clear indications for the procedure.

We wish to present a small series of 8 cases not included in the 52 cases studied above. These children had had T&A operations performed one year or more prior to consulting us. They complained of not being relieved by the operation, and of continuing to have frequent colds with fever, cough, nasal discharge of purulent nature, and frequent attacks of otitis media with suppuration. The cough was always worse in bed at night, non-productive and hacking type. Pharyngitis was a prominent sign, especially the hyperplastic lymphoid type or lateral pharyngitis. X-ray pictures showed one or both antra opaque with probable suppuration. In every case lavage produced mucopurulent discharge and all symptoms were relieved for 6 months or more. In two cases otitis media recurred later but was due to a return of antral infection with a cold. All but two of these cases were treated by lavage through the natural osteum under local anesthesia in the office. Two had antrotomies under general anesthesia and at

CHART 4

T & A WITH ANTROTOMY—38 REPLIES OR 73%

Number colds first yr. after operation.	31 or 81% reported fewer. 6 or 16.2% reported as many before as after. 1 or 2.7% reported more after.
Fever prominent symptom of colds in 20 cases or 52.6%. Absent in 18 cases or 47.3%.	11 or 55% present before operation only. 8 or 40% present before and after operation. 1 or 5% present after operation only.

CHART 5

T & A WITH ANTROTOMY—38 REPLIES OR 73% (continued)

Cough prominent symptom of colds in 28 or 73.7%. Absent in 10 or 26.3%.	9 or 32.1% present before operation only. 17 or 60.7% present before and after operation. 2 or 7.1% present after operation only.
Allergy reported present in 11 cases or 28.9%. Absent in 27 or 71.1%	3 or 33.3% present before operation only. 6 or 60% present before and after operation. 2 or 20% present after operation only.

CHART 6

ANTROTOMIES—AFTER FAILURE T & A

8 cases—T & A done one year or more—No sinus studies.
All had mucopurulent material on lavage.
All had relief from colds for 6 mo. after antral lavage.
Two recurrences of otitis media with recurrence sinus infection.
Cough, fever and nasal discharge relieved in all.

the same time had some adenoid tissue removed.

We think that recurrence of antral infection is less likely if infected tonsils and adenoids are also removed. We do not feel that T&A will relieve a well established purulent sinusitis in many cases. Since sinus infection is prone to recur with colds and acute infections, we believe a more careful follow-up by x-ray studies and treatment of the sinus is indicated, constitutionally as well as locally, and this will save many of these patients from chronic sinus and chest disease later in life. It also remains an important measure in hearing conservation.

We believe that results following operation can be improved materially by being more conscious of the presence of both tonsils and sinus disease in early life. We present it as a real cause for failure to obtain the relief desired by simple T&A in children.

This study is of a small group of cases, and the dangers of drawing conclusions from it are realized. There are certain inferential facts apparent, however, that might be stated helpfully in summarizing.

Summary

1. The frequency and severity of colds were reduced by T&A alone and where indicated, antrotomy added substantially to these results.

2. Fever was a prominent accompaniment of colds associated with infected T&A alone and in cases of combined T&A and sinus infection, and was relieved in a large percentage of cases by operation.

3. Cough was frequent with colds associated with both groups and was relieved by T&A and antrotomy. While there was little difference between the results of simple T&A and combined T&A and antrotomy, the cough associated with the post-nasal drainage of the 8 cases undergoing antral lavage after T&A had been done earlier, were all relieved.

4. Allergy was present with antral infection in 14.7%, but it is not known which precedes the other. Much less relief is experienced by operation on this group of cases, but improvement in state of nutrition, pharyngeal hyperplasias, general health and bacterial allergy makes operation justified where tonsils are definitely diseased.

5. History of frequent colds with fever and cough and otitis media should indicate antral studies. If present, the sinus should be irrigated at time of T&A to save a second anesthetic. In many cases only one lavage is necessary with post-operative antibiotics. Further x-ray follow up should be done in one month, as well as after colds or acute infections, if symptoms of recurrence of sinus disease return. Constitutional and allergic treatment should be followed throughout when indicated.

6. Cases of lateral or posterior lymphoid hyperplasia or follicular pharyngitis are often associated with antral infection or allergy, and call for investigation and treatment of these conditions.

7. Search for antral infections become more likely after T&A. If present at time of T&A and not treated, failure to relieve the patient is invited, as shown by the eight cases relieved by sinus treatment after failure of T&A alone. This might in part account for statistics showing failure of T&A operation to relieve frequency of common cold. Possibly routine x-ray studies of all T&A cases would further improve the results obtained.

8. If T&A cases are carefully selected as to freedom from allergy and sinus infections, the frequency and severity of colds and their sequelae can be expected to be reduced substantially by appropriate treatment.

9. An appeal is made to view the T&A patient as an upper respiratory disease, including allergy, sinusitis and infected T&A.

Bibliography

1. Kaiser: Relation of T & A to Infections in Children, Am. Jr. Dis. Children, 41: 1931.
2. Griffith-Ivor: Function of Tonsils and Their Relation to Etiology and Treatment of Nasal Catarrh, Lancet, 2: 1937.
3. Selkirk, Theo K.: Evaluation of Results of T & A Operation, Amer. J. Dis. Children, 42: 1931.
4. Johnson, Jos. A., and Watkins, Thos. W.: T & A—A Re-Evaluation of Results, Jour. of Pediatrics, Feb., 1954.
5. Clein, Norma W.: Allergy in the Tonsil Problem in Children, Am. Allergy, 7: 1949.
6. Smith, Harold D.: Follow-up of Patients Eight Months After Tonsillectomy, Arch. Otolaryng., 24: 1932.
7. Bass, M. H.: Results in Tonsillectomy, Laryngoscope, 44: 1934.
8. Hadfield, H.: The Tonsil Problem, J. Laryng. and Otol., 64: 1950.

307 Professional Building.

Cystosarcoma Phyllodes

D. EDWARD WATKINS, M.D., F.A.C.S.,
Waynesboro, Virginia

THIS comparatively unusual tumor of the breast was first described, and given its name, by Johannes Muller in 1838. A similar condition had been described by Chelius about 10 years previously, but the name given it by Muller has persisted for over 100 years, despite the efforts of various authors to have it changed. The term, cystosarcoma phyllodes, although admittedly histologically inaccurate, has been used most often through the years to describe this particular tumor, and, therefore, has been retained for purposes of identification. Many other titles have been assigned to it by various authors. According to Horton and Baker,[7] "some of the more descriptive names are cystosarcoma, hydatid tumor of the breast, intracanalicular papillary fibromyxoma, papilloma intracanaliculare, adenoma pseudosarcomatoids and giant intracanalicular myxoma." They then suggest still another name, "cystosarcomatoid phyllodes," which they say retains the sound of the most commonly used name, but changes its meaning to "sarcoma-like." The name given it by Lee and Pack,[9] in 1931, was "giant intracanalicular myxoma of the breast," and appears to be pretty well accepted by many subsequent authors.

This breast tumor, which has been repeatedly described by various authors, is characterized by its huge size; rapid growth following a long period of little or no growth; its unique appearance, and the fact that it is usually benign. Lee and Pack[8-9] collected 105 cases from the literature and added 4 of their own to present an analytical study of a series of 109 cases. From this study we learn that the typical patient having this tumor is a female (although 3% are males) of about 45 years of age. She will have had a small lump in her breast for 6 or 7 years, and suddenly there will have been rapid growth, of the same lump, which attains great size (average wt. 7 lbs.) in 3 or 4 months time. There is no pain and usually no discharge from the nipple. She is otherwise in good health. The discomfort from the bulk and weight of the breast is usually what brings them to the doctor. Although the average age is 45 years, one case was reported from the Mass. Gen. Hospital[11] of a 14 yr. old girl, whom I believe is the youngest one yet to be reported; and, at the other extreme, Cooper and Ackerman[1] reported three cases, the oldest of whom was 75 years old.

Upon examination (see Figure 1), the typical case, will present an enormously enlarged breast over



Fig. 1.—Gross appearance of typical case, Cystosarcoma Phyllodes. Reprinted by permission of McDonald and Harrington, and Annals of Surgery.

which the skin is frequently tense and shiny. The veins seen through the skin are dilated and prominent. The nipple is not retracted, although it is sometimes almost obliterated from the underlying pressure. There is no discharge from the nipple. The breast is lobulated and sometimes hangs heavily from the chest like a sack of oranges. In other cases it is bound to the chest wall by the tightness of the skin. In the more advanced cases, the skin becomes tense and discolored in the area of greatest tension. Sometimes the skin becomes ulcerated and, when this occurs, it almost invariably becomes infected. Only in the latter cases do the lymph nodes of the surrounding areas become enlarged and that is due to infection rather than to metastases. The skin overlying the mass appears to be free and unattached although it may be too tight to determine this. Upon palpation these tumors are found to be very firm and irregular in contour; they are sometimes fluctuant in certain areas due to the fluid filled pockets in the mass. There is no tenderness in most cases.

*Read before the Medical Association of the Valley of Virginia September 23, 1954.
Received for publication November 18, 1954.

The tumor as a whole can be moved about, if the skin is not too tight, and appears to be free of attachment to the chest wall. It is usually a well encapsulated tumor.

Pathology

Grossly, according to Horton and Baker,[7] when sectioned "an encapsulated tumor not involving the skin or nipple is seen. Hemorrhagic areas are commonly noted throughout the tumor. Cystic spaces (see Figure 2) sometimes grouped similar to a chain of lakes and containing a brown fluid or coagulated material are also present. Some cysts break into adjacent ones and have stubs or remnants of broken walls projecting into their lumen. An extensive fibromyxomatous appearance is found in some of these tumors. Histologically, the picture is varied. In the benign types the elements are myxomatous and fibrous in character and no mitoses or other suggestions of malignancy are apparent (see Figures 3 and 4). The tissue is of adult form and development. Reactive cells and hyalin deposits may be present in some areas. In general, the ducts and glands appear tortuous and some are of bizzare shape. In certain areas invaginations of fibrous or myxomatous tissue give an intracanalicular appearance, and in others these show a pericanalicular type of distribution.

The malignant forms often reveal areas entirely benign in appearance intermingled with areas in which there is cellular hyperchromatism with the presence of mitotic figures, some tendency to cellular pleomorphism and peripheral invasiveness, even into muscles.

The generally benign course of cystosarcoma phyllodes has been emphasized in many articles.



Fig. 2.—Cut surface of gross specimen, Cystosarcoma Phyllodes. Reprinted by permission of McDonald and Harrington, and Annals of Surgery.

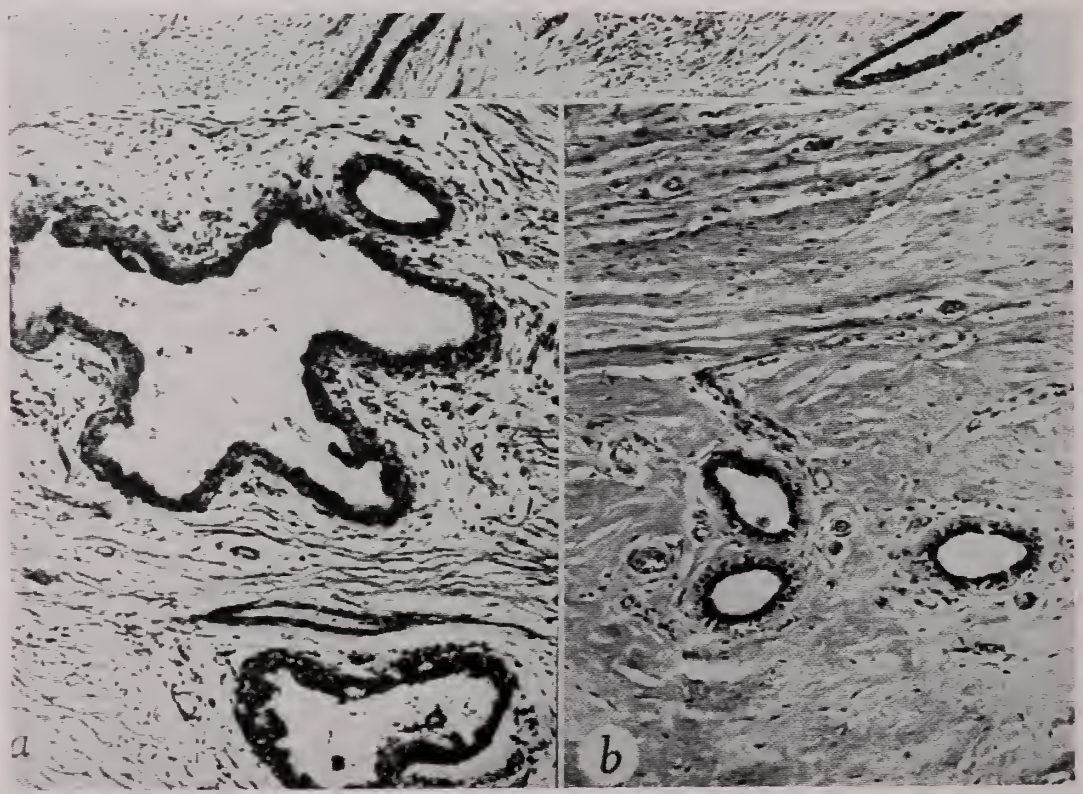


Fig. 3.—(a and b). Microscopic sections of Cystosarcoma Phyllodes. Reprinted by permission of McDonald and Harrington, and Annals of Surgery.

However, it is evident that in a few cases the tumor does not remain benign, but becomes definitely malignant, metastasizes and even recurs locally.

Lee and Pack[9] state that, "Hemisection of the surgical specimen in the operating room reveals a gross appearance, which is absolutely diagnostic and cannot be confused with any other tumor of the breast. The intracystic polypoid lobulations with narrow tortuous clefts are not simulated by any other tumor except the intracanicular fibro-adenoma. The clinical differentiation from carcinoma is not difficult. No cancer could grow so large without involving the skin. The encapsulation of the tumor, the freedom from the nipple, the lack of fixation and other evidence of infiltration are important diagnostic features. The mobility of the skin over the tumor, the absence of the orange-peel type of skin, and of regional distant metastases, as well as the maintenance of good health, are diagnostic points in which cystosarcoma phyllodes differs from cancer." Since 1931, however, a number of cases have been reported by Ackerman and Cooper,[1] Farbman,[2] Harrington and Miller,[6] and others,[12,13,14,15] in which malignant changes are sometimes found in small areas of what was thought to be benign cystosarcoma phyllodes. They also report cases in which recurrences appear on the chest wall after simple mastectomy, and occasionally there have been metastases to the lymph nodes in the axilla and to the lungs. It is interesting to note, however, that in these cases where recurrence or metastasis occurred, that the histological picture always revealed mitoses, giant cells, distorted nuclei, or some evidence of early malignancy. Grauer and Robinson[4] did experimental work on animals in which they transplanted tissue and were able to actually watch the transition of a benign adenoma of the breast into a morphologic sarcoma. In view of these observations, one must conclude that even the so-called benign cystosarcoma phyllodes is potentially malignant.

Treatment

As reported in the literature, treatment of benign cases of cystosarcoma phyllodes has varied all the way from local excision of the lesion to radical mastectomy. It has been noted, however, that in nearly all cases in which local excision was done, that because of recurrence, a simple mastectomy was necessary at a later date. Sometimes repeated operations have been necessary, and, usually, when this is the case, the patient eventually dies of the disease. Most authorities[5-10] agree that simple mastectomy, including the fascia over the pectoralis muscles, is the treatment of choice. Since the tumor is usually well encapsulated, even if some mitoses are seen in microscopic sections, simple mastectomy, if done in the first place, will eradicate the disease.

In those cases showing malignant changes, however, with any tendency to invasiveness, such as attachment to the skin or to the underlying muscles, a radical mastectomy must be done.

Radiation therapy has been of no benefit in any stage of this disease.

Finally, since intracanalicular fibro-adenomas are known to be the precursors of cystosarcoma phyllodes, the importance of their removal is re-emphasized, in view of their malignant potentialities.

Case Report

The patient, Mrs. B. M., age 60, white female, married, housewife, entered the Waynesboro Community Hospital on December 6, 1953. There was no family history of malignancy. She had one grown child. She had had no serious illnesses except for thrombo-phlebitis in the right leg about 14 years previously. She had had no surgical operations.

The patient stated that she first noticed a small lump in her right breast when she was only 12 years old. She did not see a doctor about it and it apparently did not grow through all her adult years. Even during pregnancy and lactation its size did not change. About 4 months previously, however, she noticed that the lump was getting larger, but she put off seeing about it because she was afraid it might be a cancer. It apparently grew very rapidly during the past 4 months, until she could no longer conceal it from her family, and her daughter brought her in for medical attention. Her general health has been good and she has gained weight over the past year. Her menses stopped 8 years ago and she had no further vaginal bleeding or discharge.

On physical examination the blood pressure was 160/85. She was moderately obese and had moderate dental caries. Otherwise, no significant abnormalities were found except for the right breast, which was described as twice as large as the left breast and almost entirely filled with a firm tumor. The overlying skin was edematous and stippled, like orange skin. In the upper lateral quadrant the skin was mottled in appearance, as though ulceration was imminent. The mass appeared to be attached to the nipple, but there was no retraction of and no discharge from the nipple. The axillary and supraclavicular lymph nodes were not enlarged.

The laboratory findings on urine and blood were within normal limits. Serology was negative. X-rays

of chest and pelvis showed no evidence of metastases.

A provisional diagnosis of "carcinoma of the breast" was made and a biopsy performed. The pathologist's report was "cystosarcoma phyllodes, benign." On December 10, 1953, a simple mastectomy, using a transverse elliptical incision and including the pectoral fascia, was performed and the excised breast was estimated to measure about 17 cm. X 12 cm. X 9 cm., and on cut section revealed the characteristic cauliflower-like appearance, with brownish clear fluid in the clefts of the tumor.

On microscopic examination the pathologist reported "dilated ducts lined by benign ductal cells embedded in a proliferating fibrous stroma, showing no evidence of malignancy; there were areas of necrosis, cyst formation and chronic inflammatory cells were seen. Diagnosis: Cystosarcoma phyllodes, benign."

The patient made an excellent post-operative recovery and was discharged from the hospital on the 7th post-operative day. On follow-up examination 9 months after operation, the patient was found to have no evidence of recurrence or metastasis.

Summary

Cystosarcoma phyllodes, or intracanalicular fibromyxoma, is a comparatively unusual tumor of the breast.

The tumor is chiefly characterized by its large size; by a short period of rapid growth, following a long period of quiescence of a precursory fibroadenoma; by its unique appearance, and by the fact that it is most often benign.

The gross and microscopic pathological description has been given for the benign forms, with attention focused on the fact that there are malignant variants. These tumors are potentially malignant.

The treatment has been discussed, with the conclusion that simple mastectomy, including the pectoral fascia, is the treatment of choice, except where the tumors exhibit an invasive tendency.

The desirability of removing early fibroadenomas, which are known to be precursors, is emphasized.

A case report is presented, in which the breast appeared clinically malignant, but the pathology report was cystosarcoma phyllodes, benign.

References

1. Cooper, W. G., Jr., and Ackerman, L. V.: Cystosarcoma Phyllodes, with a Consideration of Its More Malignant Variant, Surg., Gynec. and Obst., 1943, 77: 279-283, Sept.
2. Farbman, S. S.: Cystosarcoma of Breast (Phyllodes), J. Michigan State M. Soc., 1954, 53: 73-75, Jan.
3. Fox, S. L.: Sarcoma of the Breast, Ann. Surgery, 1934, 100: 401-21, Sept.
4. Grauer, R. C., and Robinson, G. H.: Pathogenesis of Fibro-Adenosarcoma of the Breast, Arch. Surgery, 1935, 31: 677-687, Nov.
5. Gerwig, W. H., Jr.: Diagnosis and Treatment of Cystosarcoma Phyllodes, Postgraduate Med., 1949, 5: 219-223, March.
6. Harrington, S. W., and Miller, J. M.: Malignant Changes in Fibro-Adenoma of the Mammary Gland, Surg., Gynec. and Obst., 1940, 70: 615-619, March.
7. Horton, C. E., and Baker, J. M.: Cystosarcomatoid Phyllodes, Am. J. Surg., 1950, 80: 896-898, Dec.
8. Lee, B. J., and Pack, G. T.: Giant Intracanalicular Fibro-Adenomyxoma of the Breast. The So-Called Cystosarcoma Phyllodes Mammae of Johannes Muller, Am. J. Cancer, 1931, 15: 2583-2609, Oct.
9. Lee, B. J., and Pack, G. T.: Giant Intracanalicular Myxoma of the Breast, Ann. Surgery, 1931, pp. 250-268, Jan.
10. McDonald J. R., and Harrington, S. W.: Giant Fibro-Adenoma of the Breast—"Cystosarcoma Phyllodes," Ann. Surgery, 1950, 131: 243-251, Feb.
11. Mass. Gen. Hosp. Case 38411, Cystosarcoma Phyllodes, New England J. Med., 1952, 247: 570-573, Oct. 9.
12. Robnett, A. H., *et. al.*: Cystosarcoma Phyllodes Mammae, Fibrosarcoma Variant, Cleveland Clin. Quart., 1951, 18: 221-226, July.
13. Ross, D. E.: Cystosarcoma Phyllodes (Giant Intracanalicular Myxoma), Am. J. Surg., 1952, 84: 728-733, Dec.
14. White, J. W.: Malignant Variant of Cystosarcoma Phyllodes, Am. J. Cancer, 1940, 40: 458-464, Dec.
15. Ross, Donald E.: Malignancy Occurring in Cystosarcoma Phyllodes—Case Report. Am. J. Surg., 1954, 88: 243-247, Aug.

A Discussion of Ventral Hernia

DENNIS P. McCARTY, M.D.,
Front Royal, Virginia

MRS. O. W., a 38-year-old white female, was admitted to the Warren Memorial Hospital in Front Royal, on July 4, 1954, complaining of severe abdominal pain and vomiting. She had had an appendectomy through a right rectus incision 12 years before, and since that time, had had a lump just lateral to the incision, which gradually grew larger. The patient failed to seek medical advice about this.

Three days before admission, the patient developed abdominal cramps and began vomiting. She remained at home and continued to vomit until the day before admission, when the pain became so severe she went to see a physician. She said he told her she had "cramps" and gave her a needle to relieve the pain. She remained comfortable for about two hours, but then visited another physician because of the recurrence of severe pain. She received another medication, which relieved her only temporarily. The patient was seen in the hospital the next day, when she was in severe distress and complained of continuous abdominal pain.

On physical examination, the patient was a 300-pound, 62-inch tall white female complaining of continuous abdominal pain. She had a large abdominal mass lateral to the right rectus incision measuring approximately 20 cms. in diameter. The skin over this area was indurated and inflamed, the induration extending to the iliac crest below and the chest wall above. The abdomen was completely silent. Her pulse was 130 and her temperature was 103. The patient was in very poor condition and it was obvious that she had intestinal obstruction secondary to a ventral hernia. X-rays were taken and confirmed this opinion. Laboratory work at the time of admission revealed WBC, 20,000; RBC, 4.7 million; NPN, 36.0; and blood chlorides, 570.

The patient was given 1,000 cc. of Ringer's solution and 500 mgms. of Achromycin intravenously. A Levine tube was passed and approximately 1,000 cc. of a yellow fluid with a strong fecal odor was obtained from the stomach. Because of the patient's poor general condition it was felt wise to begin operation under local anesthesia.

Presented before a meeting of the Northern Virginia Medical Society, August 10, 1954.

Received for publication, December 17, 1954.

She was taken to the operating room and fluids continued to run until she appeared in better condition. Under local anesthesia a skin incision was made, removing the old scar, and the hernia sac was exposed.

Once this was identified, a strong fecal odor was evident, indicating a perforation. It was impossible to identify the neck of the sac and the peritoneal cavity was entered medial to the sac and, with a finger in the ring of the hernial defect, the ring was divided. Fecal contents immediately poured into the wound through two perforations present in a gangrenous loop of small intestine. It was necessary to dissect the sac and its contents intact at the ring because of the many adhesions present. Once this was done, the bowel was resected and anastomosed by an end to end anastomosis. Because of the distention above the obstruction, a trochar was passed into the small bowel and as much gas and fluid as possible removed. It was impossible to close the abdominal wall in layers. The wound was closed with through and through interrupted 24 wire sutures and the skin with silk. A penrose drain was inserted in the abdominal wall.

The patient's post-operative condition was critical and she was continued on Levine tube suction, intravenous fluids and intravenous antibiotics. Forty-eight hours after the operation the patient had pesistalsis and was put on oral Achromycin and the tube removed. She continued to improve, but within 24 hours developed diarrhea, which lasted for the remainder of the first week. On July 6 her RBC was 4.4 million and chlorides 520. About three days post-operatively the patient developed a severe wound infection, which was expected. The drain was removed along with all skin sutures. Subsequently, the patient continued to improve and a week after surgery was put on intramuscular Penicillin and had an uneventful recovery.

This case is presented to bring out several points which I feel are important. The first and most important one, I believe, is that a patient should receive no medication, particularly narcotics, until an adequate physical examination has been done. I feel that this patient obviously had an obstruction on the day before admission which could easily have

been diagnosed had an examination been done. The patient's chance of survival would have been much greater. Another point is that it is wise for someone with hernia to have it repaired as soon as it is diagnosed while the patient is usually in good general condition rather than wait until a complication may develop.

Another interesting observation on this patient concerns the administration of saline. It has been felt in many circles that saline should not be given for 48 hours after surgery. This patient received at least 1,000 cc. of Ringer's solution each day and her clorides continued to fall during her post-operative course for the first three days. No complications developed by giving saline and I believe her smooth convalescence was definitely influenced by its administration. Also to be noted is the fact that the patient developed diarrhea on oral antibiotics, which cleared up spontaneously when intramuscular antibiotics were given. I would also like to recommend a primary through and through closure in difficult cases, as was done with apparent success in this case.

Addendum.—On October 18, 1954, the patient returned to my office and it was observed at that time that the hernia had recurred. She was put on a low calorie diet and a hernia repair is contemplated as soon as the patient loses some weight.

3 South Royal Avenue.

Age-Sequence Factors in Polio.

Polio victims under 15 years old in families without other polio cases are much safer than persons over 15 in households where polio already has occurred. Two New York City public health physicians reported in the March 26 Journal of the American Medical Association on a five-year city-wide survey which showed three significant facts:

(1) Case fatalities were higher in families with more than one patient; (2) this increase was limited to persons over 15 and was related to higher incidence of bulbar-type polio among older persons; and (3) vulnerability to polio in multiple-case households seemed to depend partly on the patient's age, whether he was the first in the family to get polio, and the outcome of the first case in the family.

Drs. Morris Siegel and Morris Greenberg said the reasons for more bulbar polio and higher fatality rates in older persons are not known. Except possibly for tonsillectomy, no factor has been definitely connected with the incidence of bulbar polio, the most serious type, which attacks the nervous system. Their study shows that age and sequence of cases in a family have an important bearing.

From 1949 through 1953 there were 5,563 cases and 321 deaths from polio in New York City, a fatality rate of 5.8 per cent. The case fatality increased with age. There was about a twofold difference between ages 0-4 and 5-14, and a twofold difference between ages 5-14 and 15 and over. The case fatality under 15 was about a third of that over 15. Based on previous history, the rate under 15 years was at the expected level, but over 15 it was 100 per cent higher than expected. The over-all fatality rate also differed between families with one case and those with more, an increase of about 45 per cent in multiple-case families.

These differences seemed to be related to bulbar incidence. Among younger persons, the bulbar rate was at the expected level. About 16 per cent of the younger victims had bulbar-type polio, regardless of the number of cases in the family. But over 15, bulbar incidence was higher for single cases and almost doubled for patients in multiple-case households. The fatality rate for bulbar polio in younger patients was about the same regardless of the number of cases. Over 15 years old, it was 50 per cent higher in multiple-case families than in single-case ones. This increase was limited to persons over 14 who developed the disease after it already had appeared in the family.

These increases also were related to the outcome of the first case in a family. The fatality rate among polio victims over 15 who were the first stricken was 37.5 per cent. The rate for over-15 cases after the first was 100 per cent. A few of these subsequent cases seemed to have been infected from the same source as the original case, but most of them seemed to have caught polio from the first victim in the family.

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

Children at Eastern State Hospital

(*This article by one of the educational therapists presents a true picture of our endeavor to establish as nearly normal conditions as possible for the young people who are placed in the care of Eastern State Hospital for temporary periods. These young people, although their needs vary widely from those required for mentally ill adults, have to be housed in the same buildings.*

Effort is made to assign these children to areas where they will be in contact with the less psychotic patients and to keep them wholesomely occupied with educational, recreational or work projects during their waking hours. But in a mental institution where the adult patients may evidence sadism, obscenity or sex perversion without warning, the physicians, nurses and various groups of therapists cannot entirely protect these young people from sights and sounds which may influence their future lives adversely.)

GRANVILLE L. JONES,
Superintendent, Eastern State Hospital

In the last two years over fifty children have been placed in the care of Eastern State Hospital in Williamsburg. In March, 1955, we have twenty-seven children under eighteen years of age in the hospital. They look, to an outside observer, like a group of normal, happy children who often kid one another and their teacher, play jokes on older patients, and wisecrack. But they are not normal or happy children for the most part. There is a touch of sadness in their eyes and this perhaps reflects their story.

Many of these young people are very familiar with doctors, judges, social workers and ministers. Often they have been tested by psychologists. The ink-blot tests are old stories to them. At home, perhaps, the sentences they have heard most frequently are "What makes you act as you do?" or "I can't understand you." These children are the result, or perhaps better, the victims of both biology and environment. They come to a mental hospital where they are observed, studied and, where necessary, treated. In many cases they are unloved, unwanted and misunderstood. They have been misfits in their homes, in their schools, in their communities. Unfortunately, in some cases their conduct before entering the hospital has been objectionable and dangerous in a normal society.

Behind each of the children at Eastern State Hospital is a story which is worth reading. In telling a few of these stories, fictitious names will be used to protect the children. First, there is Sam. He is nine years old with an IQ above average. He is the oldest of three children, a bundle of energy which in an over-crowded third grade proved to be a disturbing element. When anything out of the ordinary occurred in his class, he was the first child suspected and usually rightly so. One day, when he was wrongly accused, violent resentment filled his active mind. After school that night he had his revenge. He entered the school and made the classroom a shamble by turning over desks, painting blackboards with obscene language and destroying books. He felt that he had evened the score. He was not sorry. He still is not sorry. The school felt that such a behavior problem could not be coped with in a situation that was already difficult due to the overcrowding. He was expelled and his home suffered by his enforced presence. He took radios, clocks, just anything he could get his hands on, apart because his pride kept him indoors while the other children were in school. This behavior continued for months and at the end of that time he was sent to this hospital for observation and study.

Then there is Martha, whose story is very different. She is one of our older girls, an adopted child who has grown up in a comfortable home. Her parents were financially able to give her many advantages. Recently her father died. She loved her father but had never been able to get close to her mother. She has what she herself calls a "crazy temper". Whenever she could not get her own way at home she put on a scene. Sometimes she lost control to such an extent that she did physically violent things to get her own way. She has been to psychiatrists, psychologists, corrective institutions, boarding schools, and to a convent. We have had her at Eastern State Hospital for six months and in that time she has been most cooperative and has yet to present to us a problem. She is attending the local high school where she is popular with the young people of the

Article prepared by Margaret Hare Smith, A.B., Educational Therapist, Eastern State Hospital, Williamsburg, Virginia.

senior class of which she is a member; also with her teachers. Recently she was heard to say: "I wish I could stay at the hospital and go to college. I know I can count on people here. At home I was never sure just where I stood."

Jimmy is ten years old with lovely, soft, brown eyes and an appealing smile. Some people have considered him a sadist, but a knowledge of his home makes us understand more about his behavior. His father, mother and grandmother live in a one room shack with seven siblings. There is no door, no windows and very sparce furnishings. Jim's prize possession was a pencil his mother had given him. One day Jim's pencil disappeared. Very soon Jim discovered it in the pocket of a playmate. When this discovery was made they were walking beside a shallow creek. An argument resulted, which was settled when Jim held his pal's head down in the creek, not realizing perhaps that his action would cause the little boy's death. Jim has been in study homes and is now at Eastern State Hospital for observation.

Margie has been with us for two years. She isn't very bright, she isn't very pretty. Her story is not pleasant. She is an illegitimate child who has been handed around from one home to another, including foster homes, orphanages, and corrective institutions, and has run away from all of these at one time or another. On one occasion she joined a carnival and I think the happiest days she has ever spent were those when she was trooping with this group. She loves animals because she feels that "they don't let you down". Margie craves affection which she has never had. She once said: "I can't remember anyone kissing me goodnight."

The teaching which takes place in a mental hospital is very informal. Perhaps it resembles a one-room country school. Our children grade from sub-first to the twelfth. The subject matter taught, in my opinion, is far less important than the resocialization of these children. When the school program was started, the boys came at first because it was required of them. They made no effort to look well and they were not overly cooperative. At the end of the first month coeducation was introduced. Attitudes and appearances were vastly improved. Some of our children work on individual projects; Margie, for example, has done much reading and writing on the subject of small animals of the Southwest. Martha, who is musical, has done some creditable research on the lives of composers. Sam, who wants to travel, has read extensively in the field of ancient and modern history so that he will understand better, so he says, the people whom he hopes to meet.

To make a generalization, the children like arithmetic, spelling and economic geography. They do not like grammar. They all love to be read to. To include all of our children (we sometimes have as many as sixteen in a group), we use devious methods —educational games, spelling matches, arithmetic quizzes.

Often situations arise which are common to any school. For example, Joe, who is sixteen, handsome, and never fond of school, comes into the group announcing loudly "I ain't going to do nauthing. I just come to set and watch." Individual attention and patience are required in such cases. Many of the children, due to their condition, have to be handled individually. Fortunately, at Eastern State Hospital, we have an excellent volunteer program with assistance by our Gray Ladies, some of whom are William and Mary students who have had some training in the handling of psychotic children. Enough cannot be said about the importance of the work of volunteers with these young patients. These children respond enthusiastically to people who come to them from the community. Frequently they remark "how swell it is for people to come to us", especially when they realize that these visitors come on a voluntary basis. Those working with the children in the educational program do not wear uniforms. We are constantly amused at the comments concerning our clothes, our hair dos, our nail polish and lipstick. It is rewarding to have a girl, whose world has been one of fantasy, come forth suddenly with an enthusiastic comment on someone's personal appearance.

Our local school has accepted those children whom we have felt were ready to enter a normal school situation. We do not ask that our hospital children make high scholastic records, but we do hope that they will not present social or behavior problems. They have been accepted by the children of the community on an equal basis and are making their own contribution to the school. In fact, many of the children of the community are quite unaware that these children from the hospital are in their own home room —they are looked upon as members of the community. This is most encouraging to those who are working constantly with these boys and girls, and have placed faith in them.

What does all this add up to? We receive them, the unloved, the unwanted, the unpredictable children, the emotionally disturbed children. We study

them, and our psychiatrists and psychologists give them suitable therapy. Some of these children may be in mental hospitals for a long period. We try to make the lives of this group less dull by giving them something pleasant or happy to think about. In time, about one third of these children are returned to their homes or their communities as better adjusted individuals. Perhaps their stay in the hospital has shown them that they can count on many friends who have tried to understand them and so succeeded in making them feel wanted and loved.

Book Announcements . . . .

Drugs in Current Use—1955. Edited by WALTER MODELL, M.D., F.A.C.P., Associate Professor, Clinical Pharmacology, Cornell University Medical College. Springer Publishing Company, Inc., New York. 1955. 147 pages. Price $2.00.

Hypertension. Humoral and Neurogenic Factors. CIBA FOUNDATION SYMPOSIUM. Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Margaret P. Cameron, M.A., A.B.L.S. Assisted by Joan Etherington. Little, Brown and Company, Boston. 1954. 294 pages. With 73 illustrations. Cloth. Price $6.75.

Public Relations in Medical Practice. By JAMES E. BRYAN, Administrator, Medical-Surgical Plan of New Jersey; Formerly, Executive Officer, The Medical Society of New Jersey; etc. Foreword by Louis H. Bauer, M.D., F.A.C.P., Secretary-General The World Medical Association; Past President American Medical Association; etc. The Williams & Wilkins Company, Baltimore. 1954. xiv-301 pages. Cloth. Price $5.00.

Recent Advances in Medicine and Surgery (19-30 April 1954). Based on Professional Medical Experiences in Japan and Korea, 1950-1953). Army Medical Service Graduate School, Walter Reed Army Medical Center, Washington, D. C. Volumes I and II. For Sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Price $1.75.

La Pensee Morale en Medecine. By WALTHER RIESE, M.D. Presses Universitaires de France, Paris, 1954. Pp. 81. 420 francs.

Walther Riese, who teaches History of Medicine at the Medical College of Virginia, published five years ago a historical-philosophical study of the development of the "causal idea" in medicine (La pensée causal en médecine, Paris, 1950). His new book treats in a corresponding manner the development of the "moral idea" in medicine. The various steps in the history of medical ethics from the Greeks to modern time are analyzed with special emphasis on the general moral code and the moral philosophy of the various epochs of civilization. Medical ethics are the moral ideas according to which should be shaped the interhuman relations between physician and patient, between physician and the public, and between fellow physicians. Therefore, the main chapters of Riese's book deal with the moral problem governing the general relation between physician and patient and with the special moral problems in diagnosis, in therapeutics, and in prognosis. The chapter on the moral problems of preventive medicine as well as that on the physician as an expert witness discusses the physician's obligation to the public. The chapter on the interprofessional relation among physicians stresses the thought that the moral ideas governing this relation do not lead to an actual conflict with the moral ideas of the physician-patient relation provided one keeps in mind that in moral action one has to consider the totality of life and of the universe.

Throughout the whole book Riese refers frequently to the code of ethics of the A.M.A., sections of which are cited in foot notes, and to the oath of Hippocrates. To assist the reader, an appendix contains a French translation of the original Greek text and the modern Geneva version of 1948.

With this book Dr. Riese again gives a proof of high scholarship. It is regretful that up to now the book is published only in French, and thus the number of American physicians and medical students who would profit from it will be rather limited.

ERNST FISCHER, M.D.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Salmonella Infections

Salmonella infections are of interest because of the fact that they are caused by the many members of the genus Salmonella which occur widespread in humans and in animals and poultry. There are three groups: first, those found only in man; second, those that are usually found in animals or birds but are capable of causing disease in man; and third, those found only in animals or birds. The illness in man resulting from infection with organisms belonging to the first and second group may present itself through symptoms covering a wide range, from severe enteric fever, which closely resembles typhoid fever, to mild gastro-enteritis. It is important to remember that the typhoid organism is now classified as one of the Salmonella and belongs to Group D. Paratyphoid A belongs to Group A and Paratyphoid B, due to S. schottmuelleri, to Group B.

The diagnosis of a salmonella infection is made by isolation of the organisms from blood, feces, urine, or some local point of infection. In the typhoid types the isolation may be made early from the blood and later from the stools. In gastro-enteritis due to salmonella the organisms are isolated later in the disease in contrast to infections by bacillary dysentery organisms, which are found early. The Salmonella frequently persist into convalescence. While S. typhosa may be found in carriers a year after infection and may persist for years, the other salmonella tend to disappear within 3 or 4 months after the infection has subsided. Salmonella infection in infants and in the aged and debilitated may be very severe and even fatal.

Many food poisoning outbreaks are due to salmonella. Symptoms develop in from 6 to 48 hours, the mean time being 19.9 hours, and are nausea, vomiting and diarrhea. Abdominal pain may be severe and appendicitis must be ruled out.

In Virginia in 1954 there were 70 cases of typhoid fever reported and 116 cases of salmonellosis. Of the 70 typhoid cases only 45 cases were confirmed by laboratory diagnosis. Of these 45, there were 27 in whom there were positive fecal or blood cultures and 18 in whom the diagnosis was made by agglutinations in high titers. The laboratory confirmation in the other 116 salmonella infections was higher, 104 of them were positive through stool cultures. For accuracy of diagnosis it is highly important that specimens of both stool and blood be submitted for examination. Organisms can be identified as being salmonella and can be placed in the group to which they belong. They can be further identified through the use of specific sera and can be given their proper names. In many cases this may be very important, while in the vast majority of instances it is sufficient to know that they are salmonella.

Sanitation and particularly sanitation in food, milk and water, is the key to the control of salmonella infections. The organisms may be present in eggs and in certain areas it might be advisable to eat eggs cooked only well-done. Fresh foods must be properly handled. The fact that most persons have subclinical cases and may be temporary carriers emphasizes the necessity of properly handling and cooking foodstuffs. The fact that some salmonella pathogenic for human beings are carried by rats and mice makes rodent control a necessity. Elimination of flies from the premises where food is prepared should be complete. It is definitely certain that persons with diarrhea should be excluded from handling food and from caring for infants.

The chief salmonella vaccines are those that include typhoid and paratyphoid A and B. In addition to the usual use of these as preventive measures, they are generally used in emergencies brought about by war, floods, etc. Cases do occur among vaccinated persons but chiefly when the vaccine has been administered after the infection has been acquired and in those cases where, though given at the proper time, the infective dose is large.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	Mar. 1955	Mar. 1954	Jan.-Mar. 1955	Jan.-Mar. 1954
Brucellosis	2	3	5	7
Diphtheria	6	2	9	19
Infectious Hepatitis	125	685	473	1683
Measles	495	4344	1261	7219
Meningococcal Infections	14	19	29	43
Poliomyelitis	1	7	5	14
Rocky Mt. Spotted Fever	0	0	2	0
Streptococcal Infections (Including scarlet fever)	947	508	2816	1622
Tularemia	1	0	5	17
Typhoid Fever	5	4	15	12
Rabies (In animals)	47	50	157	128

Medico-Legal Notes . . . .

Medicolegal Interpretations of Deaths in Elderly People Complicated by Trauma

There is considerable confusion in the minds of many physicians concerning the classification of certain types of deaths in elderly patients whose natural disease has been complicated by trauma, which trauma in the younger age group would usually be non-fatal. The classical illustration of this type of case is an individual usually well beyond the age of sixty who is burdened with varying degrees of arteriosclerosis, heart disease, and the general infirmities of his decade and who falls in his home or similar surroundings and suffers a fractured femur. As a result of the enforced bed rest subsequent to the fracture, the victim develops hypostatic pneumonia or decubitus ulcers with septicemia and toxemia and dies. The attending physician knows there is no question of suspicion or foul play involved and because of his close attendance is apt to sign the death certificate, dutifully completing Sections 21a, b, c, d, e and f, which testify to the accidental nature and circumstances of this death.

If the same sequence of events had followed an automobile accident, however, the attending physician would not have hesitated in notifying the medical examiner immediately. The feeling that in the first instance no question of negligence or criminal responsibility is raised does not alter the fact that the death was accidental and therefore must, by law, be certified by a medical examiner.

Let us suppose next that a patient invalided by the infirmities of age suffers a fracture of the hip as a result of turning or twisting in his chair or bed or perhaps on weight bearing, undoubtedly contributed to heavily by diffuse and senile osteoporosis. If as a result of this fracture his general condition is no worse than before and a general deterioration ultimately is concluded by death, the attending physician may rightly feel that the fracture played no part in the final result and thus signed the certificate as due to natural causes. If the fracture is mentioned on the certificate in this case under "Other Significant Conditions", it is imperative that Section 21a to f be left blank to avoid any confusion with respect to possible accidental death.

The question of interpretation of the events leading to death in other cases not quite so clear-cut is a matter which must usually be settled ultimately according to the feelings of the attending physician himself. If a definite sequence of events leads from the accidental injury to death, then the death must be regarded as accidental regardless of the severity of the original injury or the length of time in between. (An outstanding example here is the war-wound paraplegic who dies ten years later from ascending pyelonephritis due to a cord bladder.) Also, should the injury aggravate to a significant degree the basic medical condition so that death is hastened, the case should be referred to the medical examiner to be certified as accidental. Three good questions to ask yourself are:

1. Is there a definite accident-to-death relationship and sequence of events?
2. Did the injury hasten death?
3. Would the patient probably be alive if the accident hadn't occurred?

If in doubt, consult with the local medical examiner.

Although it may appear that much ado has been made about nothing, it must be appreciated that accurate certification of the *manner* of death is essential for insurance purposes and that *by law* only a duly appointed medical examiner can certify an accidental death.

Contributed by G. W. Thoma, M.D., Assistant Chief Medical Examiner Commonwealth of Virginia.

Our Advertisers

Doctor, when you peruse the advertising pages of our journal, remember this: All ads are carefully screened—the items, services and messages presented are committee accepted. Our standards are of the highest. The advertisers like our journal—that's why they selected it for use in their promotional program. They seek your patronage and your response encourages continued use of our publication. In turn, the advertisers' patronage helps us to produce a journal that is second to none in our state. When you send inquiries, tell them that you read their advertisement in the Virginia Medical Monthly

Notes On Pulmonary Tuberculosis . . . .

Treatment of the Tuberculous "Suspect"
What About "Occupational Therapy"?
What About Morale?
Vocational Rehabilitation
Employment of the Tuberculous and the Ex-Tuberculous

Prepared by the Virginia State Health Department (concluding installment).

Treatment of the Tuberculous "Suspect"

Should a person *suspected* of having active pulmonary tuberculosis be treated *for tuberculosis*? In the opinion of the Virginia State Health Department, the answer is *no*!

It goes without saying that clinical syndromes—acute or sub-acute—which include x-ray findings compatible with active pulmonary tuberculosis, most assuredly need treatment, often prompt treatment, sometimes in a hospital, pending diagnosis. The course of the disease and its response to treatment *may* (but not always) help to establish a diagnosis. But unless or until a definite diagnosis of *tuberculosis* is made—the patient, upon recovery, will at no time have been treated *for tuberculosis*. This is as it should be. If and when the party later becomes ill from any cause, his new malady will be regarded by the patient and analyzed by his physician, *without prejudice*, as far as tuberculosis is concerned.

In past years, many "suspects" treated for tuberculosis have fallen victim to a false sense of security, when their lesions responded, at least superficially, with unexpected celerity. Recurrence of symptoms, sometimes months later and particularly when not severe, were often ignored by the patient for long periods because he was under the impression that the earlier successful "therapeutic test" had eliminated the possibility, or at least the likelihood, of tuberculosis being responsible for their reappearance.

More recently, the "suspect" who is given specific anti-tuberculosis drug therapy, and who responds promptly, as he sometimes does *even when the lesion is non*-tuberculous, is left in a quandry as to whether he did or did not have tuberculosis—and his physician may suddenly be bereft of all means for definitely establishing the presence of this disease—except by waiting for what may prove to be a costly clinical reactivation in a patient, who, during the interim, remains serenely unimpressed by the potential seriousness of his predicament.

A diagnosis of tuberculosis almost invariably implies need for *prolonged* (though *not necessarily* stringent) therapy—*long* past the point of subsidence of the presenting episode. Sub-clinically active tuberculosis must *categorically* be presumed to follow clinical disease, and *in every instance*, should be specifically treated for the important entity that it is. (See April 1955 issue, Virginia Medical Monthly). Prolonged treatment (months) for the subclinical component of active disease can be justified only after a definite diagnosis of tuberculosis has been made, *during the clinical phase!* Appropriate treatment will be carried out consistently and willingly by the apparently heathy subject, during the subclinical phase, only when the original pronouncement and its implications in terms of total therapy were thoroughly explained to him at the time, and accepted by him and his family.

When *no* definite conclusion has been reached with respect to etiology, following subsidence of the clinical episode in question, and when pulmonary tuberculosis continues to be a primary contender for diagnosis, the "suspect" should be accorded the benefit of standard diagnostic study for tuberculosis during ensuing months—to confirm or exclude the presence of this disease—the same as would be done for any other clinical suspect without history of recent illness. Preferably the patient should not, during this study period, be under *any* form of treatment which might obscure or delay diagnosis; certainly he should *not* be under treatment *for tuberculosis!*

This is not to say that diagnosis of tuberculosis is contingent upon laboratory confirmation (positive sputum or culture). It does mean that *treatment for tuberculosis* in and of itself *implies diagnosis* whereupon treatment for this disease should be carried through from start to finish—regardless of subsequent laboratory findings—*unless* convincing additional evidence is adduced during course of treatment to indicate definitely that a mistake in diagnosis has been made; the *diagnosis* will then be changed as occasionally must be done with other diseases. In the meantime, no *"suspect"* has been treated for tuberculosis!

When a clinical diagnosis is made in the absence of sputum and specific treatment (systemic rest and/or drugs, etc.) is prescribed, the physician in attendance will do well to have at least three gastric lavage cultures made on non-consecutive days prior to initiation of therapy. This may be the last chance

during this particular clinical (and sub-clinical) episode to secure laboratory confirmation of his diagnosis—which, of course, is a satisfaction if positive —but is no reason *in and of itself* for a change of diagnosis or of therapy should the reports be negative, *provided the original clinical diagnosis was well founded.*

Finally and perhaps needless to say, if an x-ray shows what *could* be advanced tuberculosis with cavitation, depicting a lesion which would most likely be heavily communicable *if tuberculous,* the suspect, if a teacher, or otherwise employed in a position where he or she would be in close contact with susceptibles, should be given a leave of absence until the question of communicability is settled.

What About "Occupational Therapy"?

Many forms of physical and mental pursuits prescribed or condoned in course of treatment for pulmonary tuberculosis, are found, upon analysis, to be neither "occupational" or "therapeutic", in the usual meaning of these words.

They are not "occupational" because they have no bearing whatever upon the patient's pre-illness method of earning a livelihood, to which, upon recovery, he may plan to return. Nor are most of them *directly* tied in with any contemplated vocational rehabilitation program.

They are not "therapeutic", although naturally any closely supervised and preferably purposeful or useful regulation of exercise during leisure hours will tend to *expedite* treatment, if for no other reason than by forestalling some of the thoughtless, exuberant, or impatient outbursts of energy-consuming exercise that all too frequently have been observed to take place when the untutored patient is left to his own devises—"to shift for himself" during leisure hours—to the ultimate detriment of his treatment program. A gastro-intestinal specialist who relieves a tuberculous patient's (non-tuberculous) indigestion, also is not treating pulmonary tuberculosis per se—he is *expediting* treatment for tuberculosis by helping to make possible the carrying out of anti-tuberculosis therapy, as prescribed.

The patient who has been well schooled in basic facts about tuberculosis, *as a disease,* and its principles of treatment, can usually without *too* great difficulty, be trained during course of orientation, to avoid consistently physical and other excesses, which he will then do on his own responsibility and initiative, without resort to subterfuge masquerading as "therapy".

Temporarily, at the beginning, or occasionally for short periods during course of treatment, the as yet un-orientated, or the emotionally disturbed patient, may be permitted to indulge in certain physical or mental pursuits that are wholly out of line with his calculated over-all treatment program. True, *these* concessions *are treatment,* but like psychotherapy, when indicated, they are applied to meet specific complications, *not* for tuberculosis. Much as basic treatment needs for tuberculosis are sometimes given secondary consideration for a few days or weeks in preparation for surgery (see footnote, January 1955 issue, Virginia Medical Monthly), treatment requirements *for tuberculosis,* again must, upon occasion, be relegated to a position of secondary importance until the complication has been effectively dealt with.

With rare exceptions then, the term "occupational therapy" is a plain misnomer, as it is commonly applied to patients with active pulmonary tuberculosis, in or outside of sanatoria. It is a particularly dangerous concept for the patient who does not understand basic facts about tuberculosis or its principles of treatment, since the latter is disposed, *by nature,* to regard fondly, pursue vigorously (often to excess) various energy-consuming pursuits—if he can feel secure in the delusion that these are officially recognized, tried and true, elements of therapy *for tuberculosis,* in the same general category as "systemic rest". Being unaware of having any condition in need of therapy *except* tuberculosis, he naturally assumes that whatever *therapy* he takes is *for* tuberculosis!

Substitute terms such as "diversional pursuits" or "recreational pastimes" are suggested for the general practitioner to cover this field. He will find these concepts much easier to explain to his charges.

Fortunate is the patient and to be congratulated is the sanatorium where facilities for such direction are provided—where patients can be purposefully engaged during leisure hours—with many of their physical and mental pursuits supervised to their greater joy, sense of accomplishment, and *safety!*

* * * * * *

Virtually all patients discharged from sanatoria still have active disease, in the sense that further treatment is prescribed upon return to place of residence. This treatment almost invariably includes a "modified" systemic rest regime. In connection therewith, close supervision of pursuits during leisure hours continues to be paramount, whether the ultimate objective be cure or "control".

For years, many *needless* exacerbations, wrongly labeled "relapses", have been reported among poten-

tially curable patients because recreational or diversional pastimes were not as carefully supervised as they should have been during this crucial period between the time the patient was no longer in need of sanatorium care as such, and the time when he normally would have become eligible for re-classification as "apparently inactive".

It should be stated, at this point, perhaps parenthetically, that a patient need not necessarily be able to qualify as "apparently inactive" as this term is used by the Virginia State Health Department before accepting gainful employment. Eligibility for employment would depend upon whether treatment for his residual sub-clinically active disease was compatible with engagement in the occupation under consideration. Numbers of patients, for example, have worked for years while still taking reversible pneumotherapy, finally to achieve clinical cure. Many patients, on the other hand, still under treatment, have clinically reactivated while employed, *not* because of the employment, but because of lack of strict supervision of daily life patterns *during the hours they were not employed*—resulting in deviations which completely nullified residual formally prescribed treatment—which latter would otherwise have been wholly adequate to the purpose. It cannot be over emphasized that "curetaking" is a *24 hour proposition!*

What About Morale?

All physicians dealing with tuberculosis are agreed that a good morale is "essential" or at least an exceedingly important component in most treatment formulae. But good treatment also requires over-all balance and perspective.

Take an extreme case, for example—consider that of a man (from Texas) who comes to the sanatorium accompanied by his horse. The man assures the Medical Director in all seriousness that, having been raised in the saddle, he simply couldn't think of living without his mount by his side. If denied his daily morning canter he insists he would not be able to maintain that so-essential "morale", of which he has heard, and which the Director himself can be quoted as having described to be "absolutely indispensable" to successful treatment of tuberculosis.

This patient, particularly if he had advanced disease, would soon enough have made clear to him by that same physician as to which came *first,* his "morale" or his *treatment requirements.*

In the Armed Services, morale is very important but it must be built around, be compatible with and, therefore, must in a sense come *second* to *basic requirements of war,* if a test of arms is to be won. Circumstances in the combat zone do not permit the soldier to state the terms under which he will or will not maintain his mental equilibrium. Otherwise an enemy who had a better outlook on life in the face of equally stark field situations would have a very great advantage.

Similarly, it cannot be over emphasized that morale must be developed and maintained adequate to the purpose *after* treatment requirements have been met by the patient if the latter would recover from tuberculosis. Barring temporary concessions (see under "Occupational Therapy"), mental and emotional adjustments must be developed *as soon as practicable* to a point where the patient will hold up unwaveringly in the face of whatever medical regime may be prescribed either at the time of original diagnosis or in accordance with actual treatment requirements as determined after a period of observation.

Physicians naturally do not insist upon a patient attempting to take more rest than is compatible with his existing state of mind, because they know that when morale is low, or progressively deteriorating from *any* cause, the total amount of rest obtainable each day will likewise decline. But when a patient must *continuously* over long periods be treated first and his disease second, the doctor can only *hope* that the rest incidentally obtained will be sufficient, when combined with various adjuvants, to effect recovery. The patient's treatment program must necessarily proceed under a potentially lethal handicap.

Vocational Rehabilitation

The *key* to determining whether or not purposeful direction of a patient's pursuits during periods of leisure is vocational rehabilitation, in a given case, is determined by the basic *intent* with which it is prescribed—without regard to whether the patient is still confined to bed, and irrespective of the person or agency engaged in administering such supervision or training.

For example, the making of leather wallets, in bed or out, would *not* be vocational rehabilitation for the man who plans, upon recovery, to return to his pre-illness occupation of auto-salesman. The making of leather wallets *under identical circumstances,* would be considered as vocational rehabilitation if the man planned, upon recovery, to go into the business, or into some allied field where his training in this preliminary skill might be regarded as an *integral* part of his *total* rehabilitation program, designed as the latter would be to compensate for an anticipated partial permanent disability, which would

preclude safe return to his pre-illness type of employment.

There are some in high places, unfortunately, who confuse the issue by insisting that "rehabilitation" of the tuberculous individual should begin *upon the day of diagnosis!* Included in the program would be *all* services rendered the patient *from that point* on—including the prescription of systemic rest, antituberculosis drug therapy, pulmonary collapse or surgery, as well as aid in adjustment to all emotional, domestic, social and economic problems of the patient and his family—throughout the patient's illness—*topped* by vocational training.

While it is true that, generically, the term "rehabilitation" can properly be so employed, it is debatable whether any useful purpose is served by thus attempting to make "rehabilitation workers" out of most if not all, who are in *any* way connected with the treatment and care of tuberculous patients *throughout* their entire course of illness.

Indeed, this concept, carried to its not too absurd conclusion, would seem to imply that if the person or agency who prepares or even pays for the meals of a tuberculous person is "committing rehabilitation" (and one must admit that "rehabilitation" would stop dead in its tracks if the patient didn't eat!) then anyone who contributes in any way to the nutrition of a perfectly healthy person, is *also* engaged in "rehabilitation"—*preventive* rehabilitation that is, thus assuring *even greater* coverage—from the cradle to the grave!

Since the term "rehabilitation", when unqualified, except in the eyes of a few career men, is almost universally associated in the public mind with *job training* and *job placement* for those who anticipate or who are permanently handicapped physically (or otherwise) *as a result* of disease, accident, or natural deformity, it is suggested that, *for practical purposes,* the general practitioner restrict his use of the term "rehabilitation" in tuberculosis to those in need of *vocational* training.

Vocational rehabilitation is no more a part of treatment for the *disease* tuberculosis than is "occupational therapy" (see above) or "exercise" generally (see January 1955 issue Virginia Medical Monthly).

Employment of the Tuberculous and the Ex-Tuberculous

Employers sometimes hesitate or refuse to hire "ex-tuberculous patients", not always without cause; for experience has taught them that the true physical status of the latter may or may not be wholly as represented. This understandably prevents *categorical* acceptance of verbal asseverations by the patient or even official certifications of health.

Positive evidence of actual or probable communicability is seldom withheld by the patient, and is never deliberately ignored by any reputable physician, but not infrequently insufficient consideration is given by either, to a continuing, painstaking, systematic accumulation of *proof of absence* of insupportable clinically active disease, *immediately prior to and following employment. Especially* to patients who have been told their disease is "inactive" *while still under treatment,* periodic examinations sometimes appear to be relatively unimportant.

It is essential that every employable patient or ex-patient cooperate to correct this unwholesome situation, because each is a potential victim of prejudice. Every patient whose disease exacerbates appreciably, and every "ex-patient" who clinically reactivates while employed, helps to increase the reluctance of employers generally to hire or to continue to retain on their payroll any person who has, or who has had, tuberculosis—including those who *have* been thoroughly processed medically before employment, and who plan to *remain* under close medical supervision thereafter.

Fellow employees have a right to take for granted not only that any patient with active disease (in the sense that he is still taking treatment) as well as any "apparently inactive" case ("ex-tuberculous" no longer taking treatment) does not have a sputum positive for Tubercle Bacilli by microscopic examination for a specified period, but that he has also had a sufficient number of negative cultures to satisfy his physician. Fellow employees have a right to take for granted that the party in question is keeping all of his appointments with his physician or clinic, for periodic x-rays and other tests, and that his employer will be notified of any lapse in cooperation.

Fellow employees also have a right to take for granted that the patient or "ex-patient" knows *all* the common symptoms of pulmonary tuberculosis—whether or not he may have experienced each of them personally—so that he will not permit himself (*even* between regular, scheduled examinations) to drift into a communicable stage of clinical reactivation *before* he belatedly consults his physician—the same as if he had never heard of tuberculosis—*as many an ex-patient has been known to do!*

Since most patients and "ex-patients" will first seek employment long, long before they can be classified as "inactive" as the term is defined by the Virginia State Health Department (October issue,

Virginia Medical Monthly), most of those seeking employment, or hoping to retain their job, will still be under some form of treatment (for active disease —clinical or sub-clinical), or under medical supervision without formal treatment during their "apparently inactive" phase (Probationary period—see October issue, Virginia Medical Monthly). Each in the latter groups, therefore, owes it to himself and to his fellow workers to periodically "prove" the presence of a continuing satisfactory health status.

Patients and ex-patients who *do* this, who are permitted by their physicians to retain or seek employment are *entitled* to work on the same basis as anyone else (except possibly for care of infants or pre-school children). *Fellow employees will have nothing to fear!* Employers will note that work records of the "ex-tuberculous" are often better than average. Accordingly, it is *tragically unfair* and indeed often unsound economically for industry to deny employment *upon a categorical basis,* to deserving patients or ex-patients.

It is a responsibility of attending physicians to make sure that certifications of employability *are supported by adequate tests,* and are *kept current!*

It is also his responsibility to evaluate the type and conditions of prospective employment upon behalf of his patient.

50-Year Survey.

By 1960, the nation's medical schools should be graduating from 7,300 to 7,500 physicians each year. Dr. Edward L. Turner, secretary of the Council on Medical Education and Hospitals of the American Medical Association, made the estimate in the March 12 Journal of the A.M.A. He based the prediction on projections of admissions and graduates of approved medical schools and of new schools being developed.

In the past 54 years the nation's population doubled while approved medical school graduations increased 114.6 per cent. Enrollment in medical schools increased from 12,530 to 28,227; graduates increased from 3,165 to 6,861.

Two common misconceptions about medical schools were contradicted by Dr. Turner from facts in a study of the past 50 years. While there were more medical schools and more graduates in 1900 than at present, one fact should be remembered: many of the turn-of-the-century medical schools were "little more than diploma mills." Only about a third of them could offer education that met acceptable standards for medical practice.

In 1910, however, an analysis of schools "revolutionized" medical education. Since then major medical groups have worked together in "developing and maintaining the highest possible standards of medical education in the United States in the interests of the American public." "Contrary to a common misconception, these organizations have not endeavored to control the number of physicians graduated by the schools. They have advised against medical schools undertaking to admit more students than their faculties or facilities could possibly justify, if they were to be properly educated." Dr. Turner explained the confusion which "gave rise to wild distortions . . . that only one applicant out of ten or more could possibly get into a medical school." Actually, in 1953-54, one out of every 1.97 applicants was admitted to an approved medical school. The confusion came from the fact that there were only 14,678 premedical students applying for admission—but they filed 48,556 applications. In other words, every student seeking to get into medical school applied to an average of 3.3 schools.

The 50-year study showed that "approved medical schools have increased their production of physicians through increased student enrollment as their finances, facilities, and faculty personnel have made such expansion possible. It is hoped, however, that none of them will endeavor to enroll more students than they can effectively educate into well-qualified young physicians."

Woman's Auxiliary . . . .

*President*_____Mrs. Maynard Emlaw, Richmond
*President-Elect*_____Mrs. Mervin W. Glover, Arlington
*Recording Secretary*__Mrs. J. W. Carney, Newport News
Corresponding Secretary
Mrs. Levi W. Hulley, Jr., Richmond
*Treasurer*_____Mrs. William C. Barr, Richmond
*Publication Chairman*__Mrs. Wm. S. Grizzard, Petersburg

Arlington.

A capacity audience attended the Luncheon-Fashion Show sponsored March 8th by the Auxiliary to the Arlington County Medical Society for the Benefit of Arlington Hospital, at the Washington Golf and Country Club. The $600.00 profit realized from the event will be applied to complete payment of the Doctor's Call Board donated to the Hospital by the Auxiliary and installed last year.

The Auxiliary celebrated Doctor's Day this year by entertaining members of the Arlington County Medical Society at a Buffet Supper, April 3rd at the Lyon Village Community House. Mrs. T. A. McGavin, chairman, and Mrs. H. C. Bates, Jr., were in charge of arrangements for the party. Members of the Auxiliary prepared the food for the supper.

The Telephone Committee headed by Mrs. V. J. Dardin, was an invaluable aid in contacting members for this occasion, as well as for many events in the past.

Instead of the regular April business meeting, the Auxiliary held its annual joint luncheon-meeting with the Alexandria Auxiliary on the 26th at the Washington Golf and Country Club. Mrs. Maynard Emlaw of Richmond, State Auxiliary President, and Mrs. M. W. Glover of Arlington, State President-Elect, were the guests of honor.

Helen H. Waters
(Mrs. James C. Waters)

Danville-Pittsylvania.

This Auxiliary honored the doctors at a dinner-dance at the Danville Golf Club on March 30th. The dance was held in conjunction with the observance of Doctors' Day and each doctor was given a large red carnation.

Our President, Mrs. G. V. Thompson, Chatham, gave a short address of welcome to the doctors. Replying to this was Dr. Allen L. Byrd of Danville.

Ida H. Hall
Publicity Chairman

Norfolk.

On March 22nd, a regular business meeting was held at the Norfolk Yacht and Country Club followed by a luncheon in honor of our State President, Mrs. Maynard Emlaw. Mrs. Mervin Glover, President-Elect, was also our guest. Mrs. Emlaw spoke on State Health Week.

We sponsored State Health Week locally by following the program sent out by Mrs. R. M. Reynolds, Public Relations Chairman to the Womans Auxiliary to the AMA. Window space was obtained in local department stores where health agencies could display information regarding their work and programs for this community. We held an essay and poster contest in local schools and trophies were awarded. We also had several radio and television programs to bring to the public information of some of our health agencies. Mrs. John Foster, Public Relations Chairman, was in charge of our program, with Mrs. Charles E. Davis, Mrs. Arnold Rawson, Mrs. Louis Ziv, Mrs. Lee Whitlock, Mrs. Sam DeLaura, Mrs. Brooks Moffitt, and Mrs. Nelson Payne as other members of the committee.

Mrs. John L. Rosenthal
President

Warwick-Newport News.

To commemorate Doctors' Day, this Auxiliary collected medicines from the doctors' offices and gave them to the Patrick Henry Hospital for the Chronically Ill. The Auxiliary is also purchasing a wheel chair to be given the hospital. Mrs. Emanuel Greenspon was chairman of Doctors' Day.

Mayors R. Cowles Taylor of Newport News and George T. Abernathy of Warwick issued a joint proclamation setting aside March 28th as Doctors' Day in the two cities. In the proclamation, the mayors called upon citizens to "remember their physicians on this day and in some way express their appreciation to the guardians of our health and physical well being." The proclamation read in part as follows: "Our cities owe a great debt to the unselfish physicians who have undergone many years of study and preparation, with many hardships and self-sacrifices, labored long hours to care for our sick, constantly engaging in research to prevent human misery and suffering."

Mrs. Louis J. Richman

American Medical Association.

A cordial invitation to attend the thirty-second annual convention of the Woman's Auxiliary to the

A.M.A., June 6-10, inclusive in Atlantic City, is extended to each Virginia member and to the wives of all doctors attending the convention. Mrs. David B. Allman, of Atlantic City, is general chairman and she says that although a Tea, a Fashion Show, a dinner and two luncheons have been scheduled, in addition to the general sessions, there will be ample time for sightseeing and shopping.

Everyone must register at the Woman's Auxiliary registration desk on the Lounge Floor of Hotel Haddon Hall, where programs may be obtained and tickets for all events procured.

If you have not made hotel reservations, I would suggest that you do so immediately. All reservations are handled through Dr. Robert Bradley, chairman, sub-committee on hotels, 16 Central Pier, Atlantic City, N. J. A list of hotels with rates will be found in the Journal of the American Medical Association.

Lucia K. Emlaw, *President*
(Mrs. Maynard R. Emlaw)

TV, Comics, and Books

Comic books and television programs—as such—have little effect on the educational level and behavior of youngsters. However, excessive televiewing and comic reading, and bad comic books and television programs do make a difference, according to Paul Witty, Ph.D., director of the university's psycho-educational clinic. He advised parents and children together to plan "balanced" programs of good TV and comics plus time for more valuable activities such as reading.

Dr. Witty, recently completed his fifth annual survey of TV and his 12th year of studying the effects of comic books. He reports on these studies in the February Today's Health magazine, published by the American Medical Association. Investigations showed that children now spend upwards of 20 hours a week with television, and that 90 per cent of boys and girls between 8 and 13 read comic books regularly. Both TV and comic books lose some popularity at the high school age.

The studies made it "clear" that televiewing is not closely related to intelligence or to scholarship. Excessive viewing made some difference; a group of pupils in the upper fourth of their classes were found to spend 20 hours a week at TV compared to 26 hours spent by pupils in the lower fourth. Behavior and adjustment problems associated with TV, as reported by teachers and parents, dropped sharply from 1950 to 1954, but 28 per cent of the teachers and 30 per cent of the parents said there are still problems. These involve such things as eyestrain, fatigue, nervousness, impoverishment of play, and disinterest in school.

The amount of comic book reading, too, is "unrelated to marks in school and to attainment as revealed by standard tests." "In one [study] we found that the average educational attainment of pupils who were in the upper fourth in amount of comic book reading was almost identical with the average for those in the lower fourth. . . . Similarly, the teachers reported little difference between these groups in the frequency of behavior problems."

Dr. Witty said poor school work and behavior problems involve "lack of interest . . . meager or impoverished experience . . . emotional problems . . . poor home conditions and unfavorable attitudes toward reading . . . and the condition of the home." Intelligence and individual differences also contribute, but "in pupils of similar intelligence, the home conditions and parental attitudes may be the differentiating factors in good or poor attainment and adjustment." "Parents should be increasingly interested in providing the best schools possible for all our children and they should seek to provide the best influence outside the school."

An important factor in this influence is the kind of TV programs and comic books children see. There are "good" TV programs and comic books— but "the number of 'good' is clearly too low and the number of less desirable is far too high." "Murder, torture, sadism, morbid suspense, and other fear- and tension-inducing elements are saturating children's minds and physical senses to a degree never before experienced by any generation." "More money is spent for the production of one half-hour crime western than for the production of the entire 21 program periods classified as 'excellent' by this committee."

"The parents and children should together plan balanced programs of recreation with time for children to see TV and read comic books, but also with time for them to engage in other activities of greater value." "Parents in such homes are interested in guiding children to choose the better . . . and to reject the worse. They are interested, too, in seeking to improve current offerings for children on television and in working with other adult groups for fostering the production of better TV programs and improved comics."

President's Message . . . .

A. M. E. F.

THE Federal Government has offered financial aid to medical schools and some of our more prominent institutions have indicated their approval of the plan and their willingness to accept the subsidy. This acquiescence is due to the rising costs of operation of the schools, the expansion of their activities particularly in the field of research, the smaller return on investment of endowment funds, and the shrinking number of donors to these endowments.

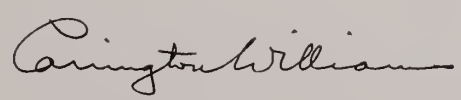
The Federal Government is already an important factor in the operation of our schools through large sums allocated for research. A very considerable amount of these funds go to faculty members for their work on these projects, so that a financial problem for many of these men would develop if the government discontinued these programs.

There are additional subsidies in clinical and public health fields. To have outright grants added would tend to put the schools in complete dependence on the federal government. This would lead to federal control, and that would leave a short step to socialized medicine.

The alternative to this most undesirable situation is to secure funds from private sources. The American Medical Education Foundation is doing that and generous donations have come from the American Medical Association and its component societies, from generous individuals and from industrial corporations.

The physicians in some states have given adequate amounts, some through state societies by increased dues and some by voluntary contributions. The latter method is more desirable and the one to be followed in Virginia. In 1954, $7,464.19 was contributed by 206 doctors making an average of $36 per donor. However, when it is taken into consideration that the membership of the Society exceeds 2500 this would mean that the total amount contributed averaged less than $3.00 per member. We must do better than this. We can afford to do it, we should have the desire to do it, we can designate the school to receive it, and we will derive great satisfaction from it.

Your officers and your committee urge you to consider the importance of this fund and to contribute generously. This is the only way to prevent another move toward the control of medicine in Washington, D. C.



President

Editorial . . . .

Coagulation Defects in Obstetrical Hemorrhage

HEMORRHAGE at term or in the postpartum period continues to be the major background for morbidity and mortality in obstetrics. Recognition and management of the major causes for obstetrical hemorrhage (premature placental separation, placenta praevia, lacerations of the birth canal, retained placental cotyledons, uterine rupture, uterine atony, etc.) have been general practice for some time. This has effected an impressive reduction of the hazards. The last two decades have witnessed, as well, great progress in approach to blood replacement and the therapy of shock. Most recently, attention has been focused upon disorders of the bleeding-clotting mechanism at term. The occurrence of fibrinogenopenia, fibrinolysins, circulating anticoagulants, thrombocytopenia, and other defects of coagulation has become subject to accurate evaluation and therapy. Meticulous approach to such disorders has further reduced maternal and neonatal mortality.

The need for systematic hematologic investigation may be recognized prior to labor from a history of a personal or familial bleeding diathesis. In patients with Rh isosensitization, the diagnosis of a coagulation disorder may be detected occasionally without symptoms and before the onset of labor by determining the existence of a reduced blood fibrinogen concentration or fibroinolysins. The incidence of fibrinogen defects in certain complications of pregnancy is large enough to warrant routine investigation. These complications include intrauterine fetal death, premature placental separation and amnionic embolization. These conditions are associated with the liberation of circulating fibrinolysins or are based upon intravascular liberations of abnormal thromboplastins. The latter may provoke intravascular coagulation and resulting fibrinogenopenia or afibrinogenemia. Hemorrhage and shock may be the basis for fibrinogen defects, fibrinolysins and other circulating anticoagulants. Extensive blood replacement may result in these same defects or in thrombocytopenia. Where blood loss is severe and where shock is present, routine hematologic study would be indicated. Such study would be advisable also when no demonstrable obstetrical cause for the bleeding is present, when purpura or ecchymosis or bleeding from other parts is noted, when blood does not effectively clot, and where potentially toxic therapeutic agents have been administered.

Systematic investigation of a patient with a suspected bleeding diathesis would ideally include a very careful history, physical examination and detailed laboratory study. When unanticipated severe postpartum or other hemorrhage occurs, it would be appropriate to draw blood for adequate laboratory testing, and then proceed with transfusion of serum albumin, other blood substitutes and, when made available, fresh whole blood. Fibrinogen defect is the most frequent non-obstetrical basis for bleeding. Serial laboratory studies have value, since other defects, particularly circulating anticoagulants and thrombocytopenias, may occur primarily or secondary to transfusion. Studies before, during and after treatment will assist our knowledge of these conditions and will facilitate treatment.

Hospitals should develop a routine plan for study when severe hemorrhage occurs in the delivery room. Studies would include a hemogram and platelet count, bleeding time, coagulation time, prothrombin time, and observation of clot retraction. Should the clot fall apart as it is incubated for one hour at 37° centrigrade, fibrinolysins are present. Fibrinogenopenia may be measured by a quantitative fibrinogen determination. A simplified fibrinogen index has been described recently utilizing human thrombin.

Adequate coagulation of oxalated blood, when thrombin is added, rules out fibrinogen defects. Failure of adequate coagulation by this technique may be based on a fibrinogen defect or a circulating anticoagulant of antithrombin type. Various modifications of the plasma recalcification time permit recognition of circulating anticoagulants. Protamine titration and/or toluidine blue titration may enable the detection of heparin-type anticoagulant. Both fibrinogen defects and circulating anticoagulants may increase coagulation time and prothrombin time as measured by usual laboratory techniques. It is vital not to assume that decreased prothrombin concentration, when reported in these situations, is based upon hypoprothrombinemia or a defect of the accessory prothrombin conversion factors, unless a fibrinogen defect and circulating anticoagulants are ruled out.

The common denominator for treatment of these conditions is replacement of fresh whole blood and the measures appropriate to correction of shock and anoxemia. However, transfusion of blood or plasma does not adequately raise fibrinogen levels when they are critically reduced. If the blood does not clot or lysis of the clot occurs and laboratory facilities do not permit rapid diagnosis of the coagulation defect, it is appropriate to administer initially two grams of fibrinogen and 100 milligrams of vitamin K_1 oxide. Protamine sulfate or toluidine blue are given where anticoagulants of heparin type are present. The corticoids occasionally have indication in acute thrombocytopenic purpuras and with fibrinolysins. Correction of the coagulation defect reduces the risk of whatever surgical procedures may be indicated, and might well obviate the need for major surgical intervention.

An index of suspicion relating to coagulation disorders in obstetrics, a routine schema for their study, and ready availability of blood substitutes, fresh whole blood, fibrinogen, vitamin K_1 oxide, protamine sulfate and toluidine blue, ACTH and the corticoids have and will reduce morbidity and mortality in obstetrical patients.

RAYMOND SCHWARTZ, M.D.

EDITOR'S NOTE: Dr. Schwartz is with the Department of Medicine of the Arlington Hospital, Arlington, Virginia.

Society Proceedings . . . .

The Southwestern Virginia Medical Society

Met at the Governor Tyler Hotel, Radford, on April 14th. The following program was presented: A panel discussion on Diseases of the Liver with Dr. Charles M. Caravati, Richmond, as moderator; Bile Pigment Metabolism as Related to the Differential Diagnosis of Jaundice by Dr. Charles L. Crockett, Jr., Roanoke; Liver Function Tests and Diagnosis of Diseases of the Liver by Dr. T. W. Green, Bristol; Anesthesia and the Liver by Dr. F. Willson Daily, Roanoke, Infectious Hepatitis by Dr. M. E. McMillan, Jr., Marion; Biliary Cirrhosis by Dr. Robert C. Crawford, Roanoke; and Surgical Consideration in Obstruction Jaundice by Dr. E. M. Chitwood, Jr., Pulaski. Dr. Charles A. Hefner spoke on Esophageal Varices.

The evening dinner speaker was Dr. J. Francis Dammann, Associate Professor in Surgery, University of Virginia, whose subject was New Advances in the Field of Congenital Heart Disease.

The Alexandria Medical Society

Held its regular monthly meeting on March 10th in the Health Department auditorium. Following the usual business session, three of the Society members conducted a panel discussion on "Handling of Disaster Casualities". Participants were: Dr. Norman Gililland who explained the total damage that might be anticipated from an atomic or hydrogen bomb burst in this metropolitan area; Dr. Alvin C. Wyman, who discussed the radiological aspects of atomic weapons; and Dr. Adrian J. Delaney, who in his remarks, emphasized the desirability of all persons having tetanus toxoid immunization. After

the formal presentation, the panelists answered questions from the audience.

At the April meeting, the subject for discussion was "Legal Aspects of Medicine".

T. F. McGough, *Secretary*

The Medical Society of Northern Virginia

Met on April 12th at Berryville, with the president Dr. Edward Hopewell, Strasburg, presiding. The program was as follows: Use of Local Anesthesia on Fifty Consecutive Cases of Thyroidectomy by Dr. Carrington Harrison; Recent Advances in Laboratory Diagnosis by Dr. George Murphy; and An Interesting Case of Histoplasmosis by Dr. Robert York. Dr. Philip Y. Patterson was guest speaker, his subject being Four Basis Concept of Antibiotic Therapy.

American Academy of General Practice.

At the meeting of the Academy in Los Angeles in March, there was an over-all registration of 6,081 which is the record attendance. Dr. John W. Fowler, Barre, Mass., succeeded Dr. W. B. Hildebrand, Menasha, Wis., to the presidency. Dr. John S. DeTar, Milan, Mich., was named president-elect and Dr. Malcolm E. Phelps, El Reno, Okla., vice-president.

News . . . .

Calendar of Coming Events

Virginia Society of Ophthalmology & Otolaryngology—Natural Bridge, Virginia, May 6-7

Evening Medical Lecture, University of Virginia Medical School Auditorium, May 9, 8:00 p.m.—Subject: Bronchiogenic Carcinoma

Virginia Academy of General Practice—Hotel Chamberlin, Old Point, Virginia, May 13-15

Evening Medical Lecture, University of Virginia Medical School Auditorium, May 16, 8:00 p.m.—Subject: The Mechanism of the Action of Insulin

American Proctologic Society—Hotel Statler, New York City, June 1-4

American College of Chest Physicians—Ambassador Hotel, Atlantic City, New Jersey, June 1-5

American Medical Association—Atlantic City, New Jersey, June 6-10

Neuropsychiatric Society of Virginia—Radford, Virginia, June 22

American Congress of Physical Medicine and Rehabilitation—Hotel Statler, Detroit, Michigan, August 28-September 2

The Virginia Academy of General Practice

Is holding its Fifth Annual Scientific Assembly at the Chamberlin Hotel, Old Point Comfort, May 13-15, under the presidency of Dr. R. M. Reynolds, Norfolk.

On the morning of the 13th, the Virginia Diabetes Association will hold its annual meeting. Their program is: General Management of Diabetes by Dr. Garfield G. Duncan, Philadelphia; Present Status of Vascular Diseases Associated with Diabetes Mellitus by Dr. H. B. Mulholland, Charlottesville; Thyrotoxicosis Associated with Diabetes Mellitus by Dr. R. C. Crawford, Roanoke; and Pregnancy Associated with Diabetes Mellitus by Dr. W. C. Salley, Norfolk.

In the afternoon, the Academy will present the following program: Treatment of Lymphoma by Dr. Byrd S. Leavell, Charlottesville; Angiography in the Diagnosis of Cerebral Lesions by Dr. Joseph T. McFadden, Norfolk; a Clinical Pathological Conference with Dr. Kinloch Nelson, Richmond, and Dr. Arnold F. Strauss, Norfolk; and Relationship Between the Medical Examiner and the Private Practitioner by Dr. C. O. Barclay, Jr., Portsmouth.

On the 14th, Dr. Lester A. Wilson, Jr., Charlottesville, will speak on Office Gynecology; Dr. William Parson, Charlottesville, A Troublesome Problem to

the Patient and the Physician—Hirsutism in Women; A Panel Discussion on Treatment of Congestive Heart Failure, sponsored by the Virginia Heart Association, with Dr. Julian Beck, Charlottesville, as moderator. Topics for this discussion are Electrolyte Balance in Heart Failure by Dr. Preston B. Lowrance, Charlottesville; Use of Digitalis Preparation in Congestive Heart Failure by Dr. Reno R. Porter, Richmond; and The General Management of the Patient with Congestive Heart Failure by Dr. R. Earle Glendy, Roanoke.

In the afternoon, Dr. Harrison F. Flippin, Philadelphia, will speak on Future Prospects of Antimicrobial Therapy, and Dr. Louis K. Alpert, Washington, D. C., of The Collagen Disorders.

Doctors from Virginia and neighboring states are invited to attend these sessions.

Dr. Newman Honored.

In recognition of his extraordinary and self-sacrificing efforts on behalf of the indigent children of Martinsville and Henry County, Dr. Samuel Newman, Danville, was honored by a special ceremony by the Charity League of Martinsville on March 8th. He was presented with a scroll of appreciation for his service as clinician at the Underprivileged Children's Clinic. The citation also marked the establishment of the Samuel Newman Hospital Fund which is designed to furnish free hospital and other medical services to patients at the clinic. Dr. Newman has made significant contributions to the many phases of the field of pediatrics, being the first to give a blood transfusion to a child in the State of Virginia, using the direct method then in vogue. He was the first to establish a blood bank in the state and pioneered in intravenous therapy and is also credited with being the first to introduce the method of treating whooping cough with injections of ether in the muscles.

The Virginia Society of Ophthalmology and Otolaryngology

Will hold its annual Spring meeting at the Natural Bridge Hotel, on May 6th and 7th, under the presidency of Dr. G. Slaughter Fitz-Hugh of Charlottesville. Dr. L. Benjamin Sheppard, Richmond, is secretary-treasurer.

The President's Reception and Annual Banquet will be held on the evening of the 6th, and the scientific program will be on the 7th. This is as follows: President's Address—Recent Trends in the Treatment of Carcinoma of the Upper Respiratory Tract by Dr. Fitz-Hugh; Prevention of Complications in Cataract Surgery by Dr. E. G. Gill, Roanoke; Rupture of the Esophagus by Dr. E. D. Vaughan, Richmond; Evaluation of the Poliomyelitis Immunization Program by Dr. Mack Shanholtz, Richmond (invited guest); Surgical Treatment in Case of Retinal Detachment with Equatorial Scleral Staphyloma by Dr. C. A. Young, Jr., Roanoke; The Nasal Septum by Dr. Maynard P. Smith, Richmond; and A Progress Report of the Hearing and Speech Center by Dr. J. R. Gorman, Lynchburg.

All members of the medical professions are cordially invited to attend the meeting.

Dr. Tudor Honored.

Dr. Thomas J. Tudor, a non-Catholic physician, who was instrumental in assuring continuation of a Catholic hospital in mountainous Southwestern Virginia, received the honorary doctor of science degree from Georgetown University in Washington, D. C., on March 25th. Dr. Tudor has practiced for forty-five years in Norton and was honored for using his prestige to help the St. Mary's Hospital survive initial opposition six years ago.

Dr. Harold Miller,

Woodstock, was recently elected president of the Massanutten Baseball League.

Southern Pediatric Seminar.

Pediatrics, internal medicine, obstetrics and gynecology will feature the 35th annual session of the Southern Pediatric Seminar at Saluda, N. C., July 11-30. The course is divided into three one-week sessions, the first one being devoted to pediatrics, the second to internal medicine and the third to obstetrics and gynecology. Those who wish to come may come for one, two or three weeks. The Seminar is for the general practitioner and is fully accredited by the American Academy of General Practice. Further information may be obtained from Dr. D. L. Smith, registrar, 187 Oakland Ave., Spartanburg, S. C.

Dr. E. B. J. Whitmore,

Formerly acting superintendent of the Petersburg Training School, has been named chief of service at Southwestern State Hospital at Marion. He assumed his duties there in April.

Dr. L. A. Faudree,

Bassett, was recently presented with a plaque by fellow members for his outstanding leadership as Kiwanis president in 1954.

Motion Picture Films

A completely revised Fourth Edition of "Professional Films" is now in compilation. It will include new sections providing biographical data on authors, and information on the audio-visual activities of medical schools, dental schools and post-graduate teaching centers.

Over 28,000 copies of previous Editions are in use by medical and dental schools, Program Chairman of State and specialty societies, and others here and abroad. AIM provides this valuable audio-visual information to the profession-at-large, without profit, as one of its contributions toward elevating the standards of medical and dental services by expediting the dissiminating of the professional knowledge.

You are urged to directly assist by (1) informing film authors of this announcement so that they can write for questionnaires, or (2) providing the film title and full name and address of any film author. Write to the Academy-International of Medicine, 601 Louisiana Street, Lawrence, Kansas.

Wanted.

An E.E.N.T. specialist and a roentgenologist for part time work in clinic located near Richmond. Write #45, c/o Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Virginia. (*Adv.*)

Position Open.

Psychiatrist, Diplomate of American Board or Board Eligible. Salary $15,000 per annum. Address "Director", care the Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Obituaries . . . .

Dr. Robert Henley Pretlow,

Prominent physician of Suffolk, died March 12th, following a stroke. He was eighty-three years of age and studied medicine at the University of Virginia, receiving his degree from the New York University in 1894. Dr. Pretlow practiced in New York for several years before locating in Suffolk. He had continued his practice until just recently and was a Virginian Railroad surgeon for many years. Dr. Pretlow was a Mason and had been a member of The Medical Society of Virginia for fifty years. He was made a Life Member in 1948. His wife and a son survive him.

Dr. Samuel Henry Nixon,

Well known physician of Christiansburg, died March 11th. He was a native of Montgomery County and sixty-one years of age. Dr. Nixon graduated from the Medical College of Virginia in 1920 and had practiced in Christiansburg for thirty years. He had been a member of The Medical Society of Virginia for twenty-eight years. His wife and two children survive him.

Tribute to Dr. Tabb.

In offering a tribute to the late Dr. Henry Adams Tabb, Gloucester, who died January 8, 1955, Dr. James W. Smith, Hayes, commented: "We had practiced together for over forty years. During that time we never had a falling-out with each other. If I ever was in trouble with a difficult case, Harry was always ready to come and help me out. We never hesitated to consult each other on any medical matter. If we didn't know off-hand, we would look it up or find out from some doctor that did know. I can do no more than give Robert Louis Stevenson's 'Tribute to the Physician' to Harry Tabb."

Tribute to the Physician

There are men and classes of men that stand above the common herd . . .

The soldier, the sailor, and the shepherd, not infrequently;

The artist, rarely; rarelier still, the clergyman;

The physician almost as a rule.

He is the flower (such as it is) of our civilization;

And when that stage of man is done with, and only to be marveled at in history,

He will thought to have shared as little as any in the defects of the period,

And most notably exhibited the virtues of the race.

Generosity he has, such as possible to those that practice an art,

Never to those who drive a trade;

Discretion, tested, tested by a hundred secrets;

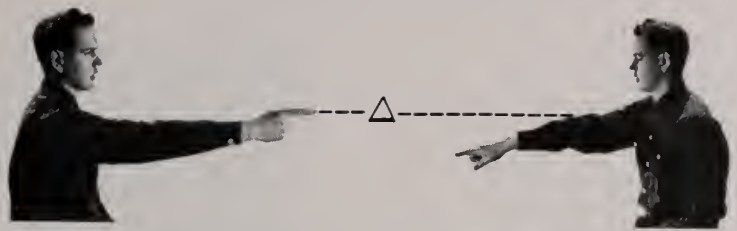
Tact, tried in a thousand embarrassments; and what are more important,

Herculean cheerfulness and courage,

So that he brings art and cheer into the sick room,

And often enough, though not so often as he wishes,

Brings healing.



1. Bárány Pointing Test. *The patient points at a stationary object, first with his eyes open and then closed. A constant error in pointing (past pointing) with his eyes closed in the presence of vertigo indicates peripheral labyrinthine disease or an intracranial lesion.*



2. The Caloric (Bárány) Test. *The patient sits with his eyes fixed on a stationary object and the external ear canal is irrigated with hot (110 to 120 F.) or cold (68 F.) water. If the vestibular nerve or labyrinth is destroyed, nystagmus is not produced on testing the diseased side.*

3. The Rotation (swivel chair) Test. *The patient sits in a swivel chair with his eyes closed and his head on a level plane. The chair is turned through ten complete revolutions in twenty seconds. Stimulation of a normal labyrinth will cause nystagmus, past pointing of the arms and subjective vertigo.*



Notes on the Diagnosis and Management of "Dizziness"

I. Vertigo

The term "dizziness" (vertigo) should be restricted to the sensation of whirling or a sense of motion.[1] This sensation is usually of organic origin and is the tangible symptom of a specific pathology.

Moderate vertigo, with a sense of motion and a whirling sensation, may be produced by infection, trauma or allergy of the external or middle ear. Examination of the ear will usually disclose the abnormality.

Severe vertigo, which will not permit the patient to stand and causes nausea and vomiting, indicates an irritation or destruction of the labyrinth. The specific condition may be labyrinthine hydrops, an acute toxic infection, hemorrhage or venospasm of the labyrinth or a fracture of the labyrinth. Multiple sclerosis and pathology of the brain stem should be considered also.

It is important to learn if the patient's sensation is continuous or paroxysmal.[2] Paroxysmal vertigo suggests specific conditions: Ménière's syndrome, cardiac disease and epilepsy. Continuous vertigo without a pattern may be due to severe anemia, posterior fossa tumor or eye muscle imbalance.

Dramamine® has been found invaluable in many of these conditions. In mild or moderate vertigo it often allows the patient to remain ambulatory. A most satisfactory treatment regimen for severe "dizziness" is bedrest, mild sedation and the regular administration of Dramamine.

Dramamine is also a standard for the management of motion sickness, is useful for relief of nausea and vomiting of radiation sickness, eye surgery and fenestration procedures.

Dramamine (brand of dimenhydrinate) is supplied in tablets (50 mg.) and liquid (12.5 mg. in each 4 cc.). G. D. Searle & Co., Research in the Service of Medicine.

1. Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.

2. DeWeese, D.D.: Symposium: Medical Management of Dizziness: The Importance of Accurate Diagnosis, Tr. Am. Acad. Ophth. *58*:694 (Sept.-Oct.) 1954.

SEARLE

STUART CIRCLE HOSPITAL

413-21 Stuart Circle
RICHMOND, VIRGINIA

Medicine:
Manfred Call, III, M.D.
M. Morris Pinckney, M.D.
Alexander G. Brown, III, M.D.
John D. Call, M.D.
Wyndham B. Blanton, Jr., M.D.

Obstetrics and Gynecology:
Wm. Durwood Suggs, M.D.
Spotswood Robins, M.D.
Edwin B. Parkinson, M.D.

Orthopedics:
Beverley B. Clary, M.D.

Pediatrics:
Charles P. Mangum, M.D.
Edward G. Davis, Jr., M.D.

Ophthalmology, Otolaryngology:
W. L. Mason, M.D.

Pathology:
Regena Beck, M.D.

Anesthesiology
William B. Moncure, M.D.
Heth Owen, Jr., M.D.

Surgery:
A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr., M.D.

Urological Surgery:
Frank Pole, M.D.

Oral Surgery:
Guy R. Harrison, D.D.S.

Plastic Surgery:
Hunter S. Jackson, M.D.

Roentgenology and Radiology:
Fred M. Hodges, M.D.
L. O. Snead, M.D.
Hunter B. Frischkorn, Jr., M.D.
William C. Barr, M.D.

Physiotherapy:
Miss Etheleen Dalton

Director:
Charles C. Hough

ST. ELIZABETH'S HOSPITAL

RICHMOND 20, VIRGINIA

STAFF

Guy W. Horsley, M.D.---General Surgery and Gynecology
D. Coleman Booker, M.D.---General Surgery and Gynecology
Austin I. Dodson, M.D.---Urology
Austin I. Dodson, Jr., M.D.---Urology
J. Edward Hill, M.D.---Urology
Douglas G. Chapman, M.D.---Internal Medicine
Eimer S. Robertson, M.D.---Internal Medicine
T. E. Stanley, M.D.---Internal Medicine
Fred M. Hodges, M.D.---Roentgenology
L. O. Snead, M.D.---Roentgenology
Hunter B. Frischkorn, Jr., M.D.---Roentgenology
Helen Lorraine---Medical Illustration

ADMINISTRATION

William Scott---Business Manager

SCHOOL OF NURSING

The School of Nursing is affiliated with The Johns Hopkins Hospital School of Nursing for a three months' course each in Pediatrics and Obstetrics, and with the Tucker's Hospital in Richmond for a 12 weeks course in Psychiatry.

Address: Superintendent of Nurses

RICHMOND EYE HOSPITAL
RICHMOND EAR, NOSE AND THROAT HOSPITAL
(COMBINED)

RICHMOND, VIRGINIA



A new non-profit Community Hospital specially constructed for the treatment of Eye, Ear, Nose and Throat Diseases, including Laryngeal Surgery, Bronchoscopy and Plastic Surgery of the Nose.

Professional care offered a limited number of charity patients.

ADDRESS: **JULIA WAGNER WATERS, R.N.,** *Administrator* **408 North 12th Street**

Third Decade of Nursing

MODERN IN EQUIPMENT

MRS. PLYLER'S

KATE E. PLYLER (1876-1947)

OLD IN TRADITION

NURSING HOME

MARY INGRAM CLARK

CONVALESCENT — CHRONIC — AGED

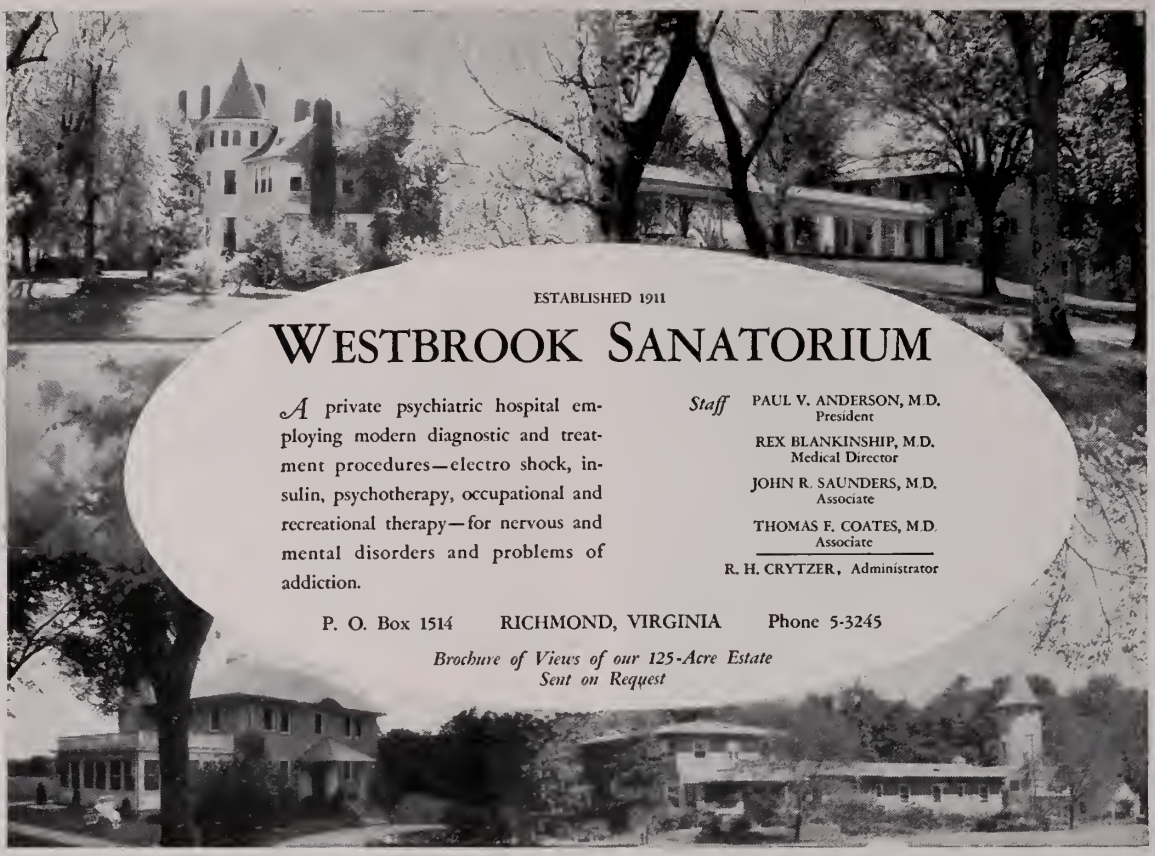
- Equipped for oxygen and transfusions
- 30 special & general nurses
- 24-hour nursing care
- Centrally located
- 50-bed capacity
- Dietician
- Rates from $42.00 to $70.00 per week for room, board and general nursing care.





For further information write or call MRS. GENE CLARK REGIRER, Supt.

1613-15-17 Grove Avenue—Richmond, Virginia—Telephone 84-3221



ESTABLISHED 1911

WESTBROOK SANATORIUM

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

Staff

PAUL V. ANDERSON, M.D.
President

REX BLANKINSHIP, M.D.
Medical Director

JOHN R. SAUNDERS, M.D.
Associate

THOMAS F. COATES, M.D.
Associate

R. H. CRYTZER, Administrator

P. O. Box 1514 RICHMOND, VIRGINIA Phone 5-3245

Brochure of Views of our 125-Acre Estate Sent on Request

RIVERSIDE CONVALESCENT HOME

Sophia & Fauquier Sts. **Fredericksburg, Virginia**



For convalescent, aged, chronically ill, and retired persons.

Centrally located in Historic Fredericksburg, on the beautiful Rappahannock, in the former Mary Washington Hospital Building. Completely redecorated and refurnished.

Eighty Bed Capacity

Medical Supervision

Inspection Invited

Rates:
$30.00 to $75.00 per week

TUCKER HOSPITAL Inc.

212 West Franklin Street,

Richmond, Virginia

A private hospital accepting for diagnosis and treatment organic neurological conditions, selected psychiatric and alcoholic cases, metabolic disturbances of an endocrine nature, individuals who are having difficulty with their personality adjustments, and children with behavior problems. Patients with general medical disorders admitted for treatment under our staff of visiting physicians.

Under the Professional Charge of

DR. HOWARD R. MASTERS, DR. JAMES ASA SHIELD

AND ASSOCIATES

SAINT ALBANS

A PRIVATE PSYCHIATRIC HOSPITAL

RADFORD, VIRGINIA



STAFF

James P. King, M. D., Director

James K. Morrow, M. D. Thomas E. Painter, M. D. Daniel D. Chiles, M. D.

James L. Chitwood, M. D., Medical Consultant

Affiliated Clinic Offering Psychiatric and Psychological Evaluation and Therapy:

BLUEFIELD MENTAL HEALTH CENTER

1400 Bland Street **Bluefield, W. Va.**

David M. Wayne, M. D., Director

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

Medical College of Virginia

HOSPITAL DIVISION

RICHMOND, VIRGINIA

A health center using the latest methods of diagnosis and treatment of disease.

MEDICAL COLLEGE OF VIRGINIA HOSPITAL
OUT-PATIENT DEPARTMENT
SAINT PHILIP HOSPITAL
DOOLEY HOSPITAL

The patient's welfare is our primary interest.

C. P. CARDWELL, JR., *Director*

Appalachian Hall • Asheville, North Carolina

ESTABLISHED 1916



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, SR., M.D.
Diplomate in Psychiatry
WM. RAY GRIFFIN, JR., M.D.

MARK A. GRIFFIN, SR., M.D.
Diplomate in Psychiatry
MARK A. GRIFFIN, JR., M.D.

For rates and further information write APPALACHIAN HALL, ASHEVILLE, N. C.

A Modern Hospital for the Treatment of Alcoholism Exclusively

A private hospital offering scientific, institutional, medical, psychological, reflex, reduction and other methods for the rehabilitation of consent patients suffering from alcoholism.

All equipment modern with facilities to take care of 50 patients both male and female.

Under the direction of a competent licensed M. D. with five consultant physicians subject to call. Registered Nurses in charge 24 hours daily.



Approved and licensed by the Virginia State Hospital Board. Atop beautiful Mt. Regis, five miles West of Roanoke, on Highway 11, in the quiet serene mountains of Virginia, conducive to rest, comfort and recuperation. Doctors inspection invited. For information phone or write.

WHITE CROSS HOSPITAL

Five Miles West of Roanoke on Route No. 11.
Salem, Virginia — Phone Salem 287

WHITE CROSS HOSPITAL

Copyright 1948. H. N. Alford, Atlanta, Ga.

RICHMOND'S FINEST + ONE OF VIRGINIA'S LARGEST

TERRACE HILL NURSING HOME, INC.

"Understanding Care"



View Showing Part of 3½ Acres of Terrace Hill Nursing Home.

TERRACE HILL NURSING HOME is a privately managed nursing home specializing in 24 hour daily nursing care for elderly people, convalescent and chronic cases. Home-like atmosphere. Exclusive park-like grounds. Supervised diets. Nutritious food. Private and semi-private rooms with baths. Accommodations for 45 guests. Under supervision of a resident, registered nurse. Rates from $45.00 to $60.00 per week for room, board and general nursing care. Your inspection invited.

City, State and Nationally Approved and Registered

For Further Information or Reservation write to

DIRECTOR, Terrace Hill Nursing Home • 2112 Monteiro Ave. • Phone 3-3993 • Richmond 22, Va.

McGUIRE CLINIC

ST. LUKE'S HOSPITAL

RICHMOND, VIRGINIA

General Medicine

HUNTER H. McGUIRE, M.D.
MARGARET NOLTING, M.D.
JOHN P. LYNCH, M.D.
WM. H. HARRIS, JR., M.D.
JOHN B. CATLETT, M.D.
ROBERT W. BEDINGER, M.D.

Orthopedic Surgery

JAMES T. TUCKER, M.D.
BEVERLEY B. CLARY, M.D.
EARNEST B. CARPENTER, M.D.

Ophthalmology, Otolaryngology

FRANCIS H. LEE, M.D.

General Surgery

WEBSTER P. BARNES, M.D.
JOHN H. REED, JR., M.D.
JOHN ROBERT MASSIE, JR., M.D.
JOSEPH W. COXE III, M.D.

Dental Surgery

JOHN BELL WILLIAMS, D.D.S.

Urology

AUSTIN I. DODSON, M.D.
CHAS. M. NELSON, M.D.
AUSTIN I. DODSON, JR., M.D.

Pediatrics

HUBERT T. DOUGAN, M.D.

Obstetrics

W. HUGHES EVANS, M.D.
W. H. COX, M.D.
JAMES M. WHITFIELD, M.D.

Bronchoscopy

GEORGE AUSTIN WELCHONS, M.D.

Roentgenology

JESSE N. CLORE, JR., M.D.
STUART J. EISENBERG, M.D.

Pathology

J. H. SCHERER, M.D.

Treasurer: RICHARD J. JONES, BS., C.P.A.

RIVERSIDE HOSPITAL, Newport News, Va.



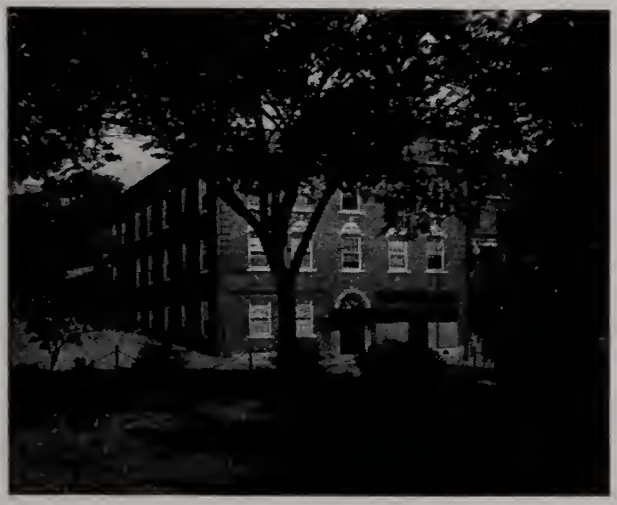
A General Hospital (265 beds) with Departments in Medicine, Surgery, Obstetrics, Pathology, Radiology, Pediatrics and Nursing. The Hospital is accredited by the Council on Medical Education of the American Medical Association for training first year interns, residencies in the surgical specialties for one and two years, general practices two years full approval, internal medicine, and obstetrics and gynecology, and the School of Nursing is accredited by the Virginia State Board of Nurse Examiners.

DAVID E. WATSON,
Administrator

MISS MARY LOUISE HABEL, R.N.,
Director, School of Nursing

Gill Memorial Eye, Ear and Throat Hospital, Inc.

Roanoke, Virginia



STAFF

ELBYRNE G. GILL, M. D.
HOUSTON L. BELL, M. D.
THOMAS QUILTY, M. D.
DORIS L. JANES, B. S., O. D.
(Orthoptics and Contact Glasses)
S. H. HOLLAND, M. D.
ROBERT B. JONES, JR., M. D.

A Modern, Fireproof Hospital, Specially Designed and Equipped for the Medical and Surgical Care of Ophthalmology, Otolaryngology, Facio-Maxillary Surgery, Bronchoscopy and Esophagoscopy.

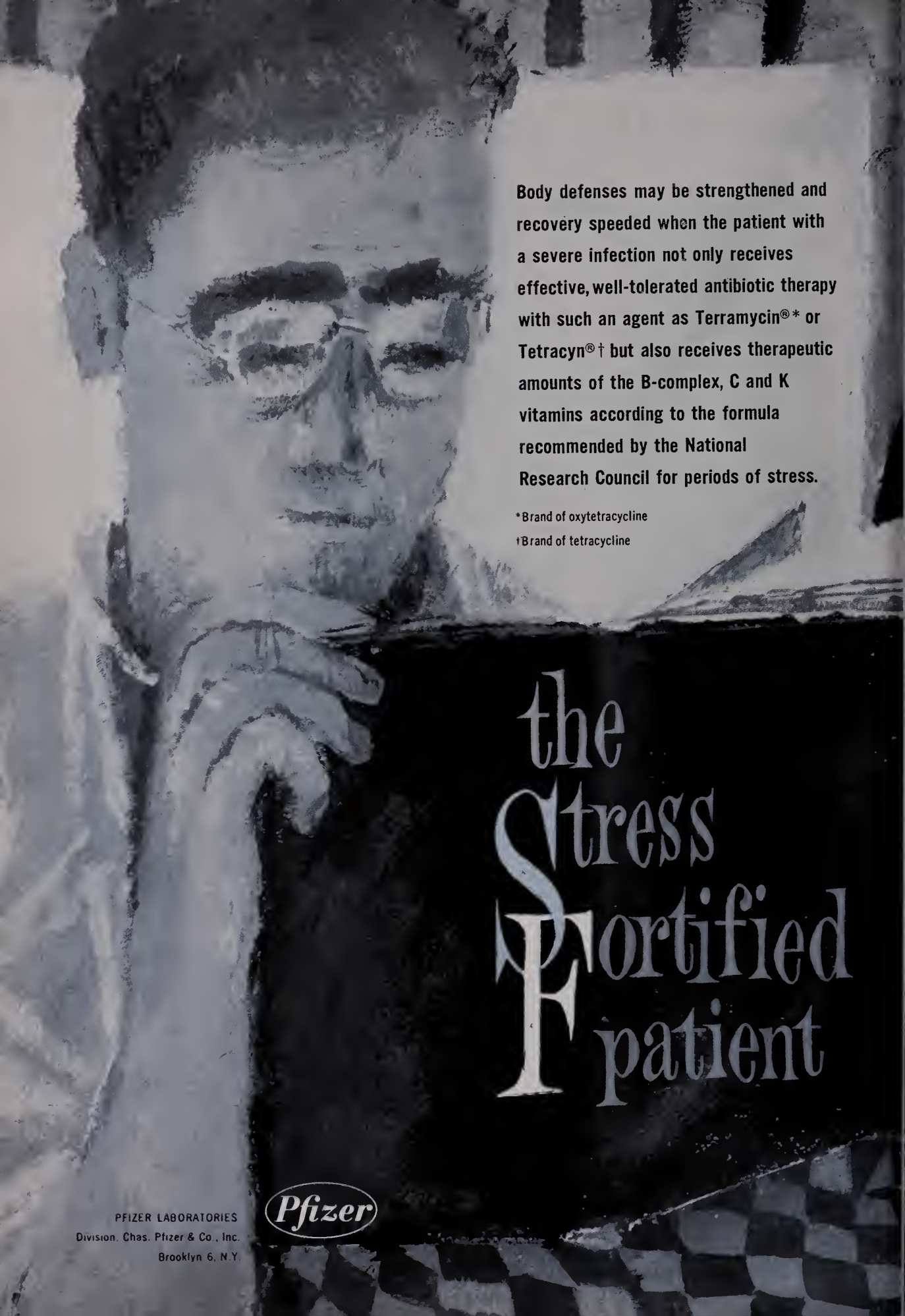
Complete Laboratory and X-Ray Equipment.

Physicians and Graduate Nurses in Constant Attendance.

The Hospital offers a residentship of three years to a graduate of an approved medical school, who has had an internship of at least one year in an approved hospital.

For further information, address

BUSINESS MANAGER, BOX 1789, ROANOKE, VIRGINIA



Body defenses may be strengthened and recovery speeded when the patient with a severe infection not only receives effective, well-tolerated antibiotic therapy with such an agent as Terramycin®* or Tetracyn®† but also receives therapeutic amounts of the B-complex, C and K vitamins according to the formula recommended by the National Research Council for periods of stress.

*Brand of oxytetracycline

†Brand of tetracycline

the Stress Fortified Patient

Pfizer

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, N.Y.

widely prescribed
for oral penicillin therapy

PENTIDS

SQUIBB 200,000 UNIT PENICILLIN G POTASSIUM

TABLETS
for adults



proved effectiveness



convenient dosage



economical for patient
Bottles of 12 and 100

CAPSULES
for infants & children



open and add
soluble penicillin to
fruit juice . . .



. . . cola, ginger ale, etc.



. . . milk or formula
Bottles of 24 and 100

EITHER WAY IT'S PENICILLIN T.I.D.

SQUIBB

PENTIDS® IS A SQUIBB TRADEMARK



KELEKET *Exclusive*
Ceiling-Mounted X-ray
Motor-Driven Tube Crane

Clear the floor for action with the Keleket Ceiling-Mounted Tube Crane. Suspended entirely from the ceiling, it offers effortless convenience in every radiographic and therapy technic.

The Keleket Tube Crane does more than the ordinary tubestand and it conserves valuable floor space. There are no rails on the floor, no obstruction whatever to the operator's complete freedom. The layout of your radiographic facilities becomes much more flexible with the Tube Crane.

Brought to practical reality by Keleket, the Ceiling-Mounted Tube Crane offers unparalleled tube manipulation, three stereoscopic shifts, fingertip positioning and precise indication of angulation.

Write for FREE brochure

KELEKET X-RAY CORPORATION
228-5 W. 4th St., Covington, Ky.
(Kelley-Koett . . . the Oldest Name in X-ray)

KELEKET X-RAY CORP.
Richmond, Va.
1303 Summit Ave.
Tel: 84-4526

KELEKET X-RAY CORP.
Baltimore, Md.
301 Chase St.
Plaza 2-5222

KELEKET X-RAY CORP.
Washington, D. C.
107-9 Tower Bldg.
1401 "K" St., N.W.
Nat'l 4049

One of a Series of Newspaper Ads.
Directed to Your Patients
and Our Customers....



his game
gets a shot
in the arm!

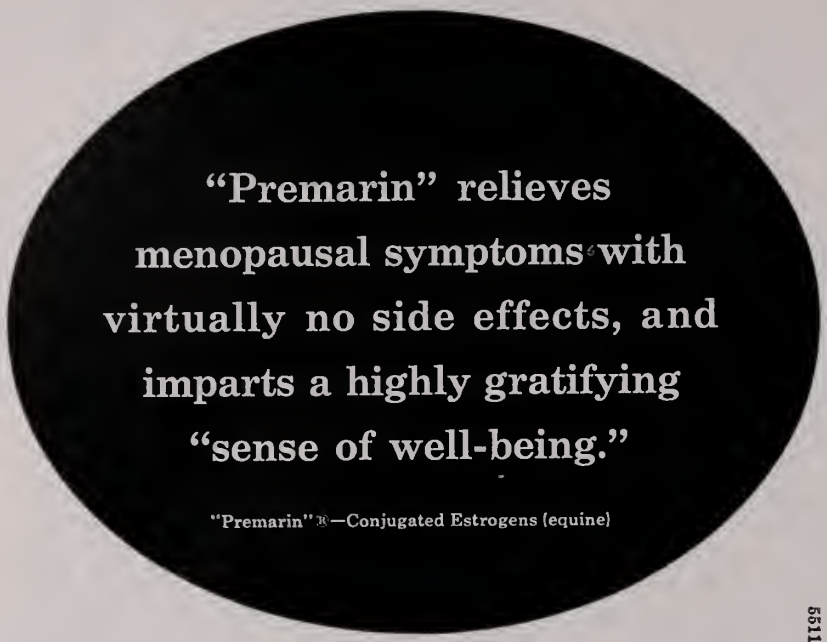
THEY MARVEL at his blazing forehand. They marvel even more to hear he needs—and uses—insulin for diabetes. Insulin and carefully regulated diet prescribed by his doctor help him and other diabetics lead normal lives.

A leading example: One of the world's best known tennis stars. Modern medicine's understanding of the chemistry of diabetes grows apace. *Result:* A new era in both medicine and human progress! As your doctor prescribes miracle medicines wisely, your PEOPLES pharmacist promptly fills each prescription accurately. Prescriptions are compounded and priced with uniform economy at any PEOPLES SERVICE DRUG STORE.

PEOPLES SERVICE DRUG STORES INC

Certified PRESCRIPTIONS
...just what the doctor ordered

© 1954 PEOPLES DRUG STORES, INC.



6511

Complete
Printing and Binding Service

Commercial, Book and Job Work, Catalogues—Publications
Advertising Literature, Booklets—Broadsides
Office and Factory Forms
Loose-Leaf and Manifold Forms—Ledger Leaves and Loose-Leaf Binders
Paper Ruling
Complete Binding Equipment

Complete Service Under One Roof

Acquaint us with your requirements. We serve you efficiently and economically.

Dial 3-1881

WILLIAMS PRINTING CO.

11-13-15 North Fourteenth Street RICHMOND, VIRGINIA

THE NEW YORK POLYCLINIC
MEDICAL SCHOOL AND HOSPITAL

(Organized 1881)

(The Pioneer Post-Graduate Medical Institution in America)

EYE, EAR, NOSE and THROAT

A nine months combined full time refresher course consisting of attendance at clinics, witnessing operations, lectures, demonstration of cases and cadaver demonstrations; operative eye, ear, nose and throat on the cadaver; clinical and cadaver demonstrations in bronchoscopy, laryngeal surgery and surgery for facial palsy; refraction; radiology; pathology, bacteriology and embryology; physiology; neuro-anatomy; anesthesia; physical medicine; allergy; examination of patients pre-operatively and follow-up post-operatively in the wards and clinics.

OBSTETRICS and GYNECOLOGY

A two months full time course. In Obstetrics: lectures, prenatal clinics; attending normal and operative deliveries; detailed instruction in operative obstetrics (manikin). X-ray diagnosis in obstetrics and gynecology. Care of the newborn. In Gynecology: lectures; touch clinics; witnessing operations; examination of patients pre-operatively; follow-up in wards post-operatively. Obstetrical and gynecological pathology. Culdoscopy. Studies in Sterility. Anesthesiology. Attendance at conferences in obstetrics and gynecology. Operative gynecology on the cadaver.

DERMATOLOGY AND SYPHILOLOGY

A three year course fulfilling all the requirements of the American Board of Dermatology and Syphilology. Also five-day seminars in Dermatopathology, for specialists and for general practitioners.

RADIOLOGY

A comprehensive review of the physics and higher mathematics involved, film interpretation, all standard general roentgen diagnostic procedures, methods of application and doses of radiation therapy, both x-ray and radium, standard and special fluoroscopic procedures. A review of dermatological lesions and tumors susceptible to roentgen therapy is given, together with methods and dosage calculation of treatments. Special attention is given to the newer diagnostic methods associated with the employment of contrast media, such as bronchography with Lipiodol, uterosalpingography, visualization of cardiac chambers, perirenal insufflation and myelography. Discussions covering roentgen departmental management are also included; attendance at departmental and general conferences.

For Information concerning these and other Courses please Address:

THE DEAN, 345 West 50th St., New York 19, N. Y.

PRICES FOR REPRINTS
of Articles Appearing in
The Virginia Medical Monthly

Trimmed Size 5¼x7⅝ ins. Type Page 3x5½ ins.

Minimum Order 100 Copies

	100	250	500	1,000	2,000
4 pp.	$ 6.00	$ 6.60	$ 8.00	$ 9.80	$13.70
8 "	10.70	12.10	13.20	17.00	23.50
12 "	15.70	17.90	20.10	25.60	37.80
16 "	16.40	19.20	22.20	28.30	40.40
20 "	18.90	23.80	27.00	33.00	49.40
24 "	21.10	25.70	28.90	38.10	52.70
32 "	28.00	34.00	39.50	55.60	75.00
Extra for Covers	6.60	7.60	10.50	12.50	18.90
Envelopes: Printed	4.00	6.10	8.30	13.20	23.70
Blank	1.20	2.80	4.40	8.30	16.50

Prices F.O.B. Richmond, Va. Shipments will be sent postpaid if check sent with order.

Orders must be placed before type is distributed.

WILLIAMS PRINTING CO.

11-13-15 North 14th Street

RICHMOND, VIRGINIA

The State Board of Medical Examiners of Virginia

The next meeting of the Board will be held at the Richmond Hotel, Richmond, Virginia, June 15, 1955, and the examinations will be held at the same hotel June 16 to 18, inclusive. June 1st is the deadline for receipt of applications for the examination and documents and papers to be discussed and acted upon by the Board. The secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

The . . . Thompson Homestead School

FOR EXCEPTIONAL CHILDREN

Year round private home and school for infants, children and adults on pleasant 250 acre farm near Charlottesville.

Write for booklet.

MRS. J. BASCOM THOMPSON, *Principal*

FREE UNION **VIRGINIA**

New, Well Tolerated Medium for Excretory Urography

94%

DIAGNOSTIC FILMS

in a series of 1123 patients

Hypaque® SODIUM 50% solution

Write for detailed literature or consult your local Winthrop-Stearns' representative.

Winthrop-Stearns INC.
NEW YORK 18, N. Y. WINDSOR, ONT.

Hypaque sodium, brand of diatrizoate sodium (sodium 3,5-diacetamido-2,4,6-triiodobenzoate)

Visit our Booths Nos. B 12-14 and G 11-13 A. M. A. Convention, June 6-10, 1955.

Upjohn

Ulcer protection that lasts all night:

Pamine tablets

Bromide

REGISTERED TRADEMARK FOR THE UPJOHN BRAND OF METHSCOPOLAMINE

Each tablet contains:
Methscopolamine bromide
2.5 mg.

Average dosage (ulcer):
One tablet one-half hour before meals, and 1 to 2 tablets at bedtime.

Supplied:
Bottles of 100 and 500 tablets.

The Upjohn Company, Kalamazoo, Michigan





A red-nosed Fokker slowly spun to earth



At 4:35 P.M., on October 30, 1918, a lone Spad biplane, marked with the symbol of the "Hat-in-the-Ring" Squadron, hawked down through the quiet skies over Grande Pré. Seconds later, a twenty-round burst of its guns smashed full into the center of a low-flying Fokker and sent the German plane swirling earthward like an autumn leaf.

The squadron C.O., Captain Eddie Rickenbacker, had downed his last enemy plane of the war, setting a record for aerial combat never equaled: 26 victories in 7 months. It made him the American ace of aces.

A year earlier, his mother had written, "fly slowly and close to the ground"; but it was advice that Eddie Rickenbacker—like many of his fellow Americans—has never been able to take. His calculating courage, ingenuity and drive are typical of our greatest asset.

Which is not simply factories, farms, or gold—but millions of a particular kind of people called Americans. And it is these people—people like yourself—who stand behind what is probably the world's finest investment: U. S. Series E Savings Bonds.

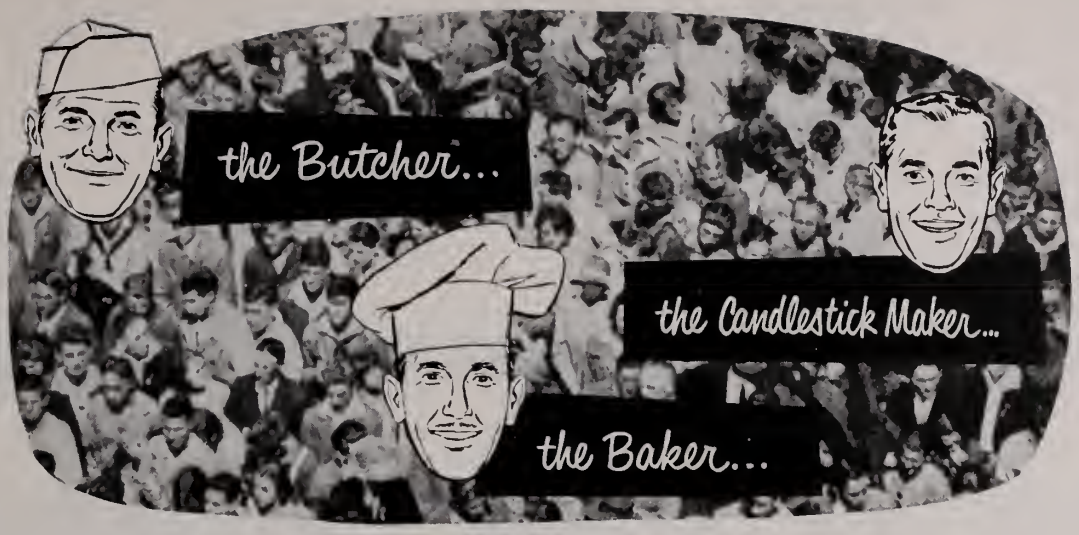
To buy these Bonds is to join them in their proud confidence of their country and its future—and to protect your own personal security as well.

It's actually easy to save money—when you buy United States Series E Savings Bonds through the automatic Payroll Savings Plan where you work! You just sign an application at your pay office; after that your saving is done *for* you. And the Bonds you receive will pay you interest at the rate of 3% per year, compounded semiannually, for as long as 19 years and 8 months if you wish! Sign up today! Or, if you're self-employed, invest in Bonds regularly where you bank. There's no surer place to put your money, for United States Savings Bonds are as safe as America!

Safe as America—
U.S. Savings Bonds

PUBLIC SERVICE ADVERTISING COUNCIL

The U.S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.



What does Enriched Bread give him Nutritionally?

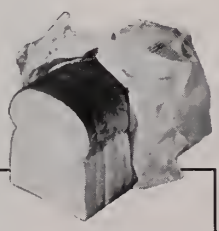
CONSERVATIVE industry estimates indicate that the per capita consumption of bread in the United States is 5 ounces daily. Since the bulk of this output is enriched white bread, the amounts of essential nutrients supplied by this quantity become significant from a standpoint of national health.

Contrary to widespread belief, enriched bread is considerably more than merely a source of caloric food energy. As the table indicates, 5 ounces of enriched bread supplies for a sedentary man, the following substantial proportions of his daily needs for these important nutrients: protein, 17%; thiamine, 28%; riboflavin, 12%; niacin, 26%; iron, 31%; calcium, 13%. Five ounces of bread also provides 16% of the daily caloric need.

This generous nutrient contribution is made at a cost of but a few cents, a fact which has led bread to be called a bargain in food.

Some twelve years ago, enriched bread came into widespread commercial production as a result of cooperation between industry and health authorities in the aim to improve the nutritional status of the American people. It has made a significant contribution to the improvement of national health and to the reduced incidence of severe and mild nutritional deficiency states.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.



NUTRIENTS AND CALORIES CONTRIBUTED BY 5 OUNCES OF ENRICHED BREAD AND THEIR PERCENTAGES OF RECOMMENDED DAILY DIETARY ALLOWANCES*

Nutrients and Calories	Protein	Thiamine	Riboflavin	Niocin	Iron	Colcium†	Calories
Amounts	12. Gm.	0.34 mg.	0.21 mg.	3.1 mg.	3.7 mg.	125 mg.	391
Percentoges of Allowonces	17%	28%	12%	26%	31%	13%	16%

*Daily dietary allawances recommended by National Research Council for o sedentary man (154 lbs.)
†Estimated average

THE VIRGINIA BAKERS COUNCIL
In co-operation with
THE AMERICAN BAKERS ASSOCIATION

on all 4 counts

ACH





wide spectrum of effectiveness
rapid diffusion
prompt control of infection
minimum side effects

the decision often favors

ROMYCIN*

HYDROCHLORIDE
TETRACYCLINE HCl *LEDERLE*

Compared with certain other antibiotics, ACHROMYCIN offers a broader spectrum of effectiveness, more rapid diffusion for quicker control of infection, and the distinct advantage of being well tolerated by the great majority of patients, young and old alike.

Within one year of the day it was offered to the medical profession, ACHROMYCIN had proved effective against a wide variety of infections caused by Gram-negative and Gram-positive bacteria rickettsiae, and certain viruses and protozoa.

With each passing week, acceptance of ACHROMYCIN is still growing. ACHROMYCIN, in its many forms, has won recognition as a most effective therapeutic agent.

Lederle

LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* Pearl River, New York

*REG. U. S. PAT. OFF.

The Geriatric Diet strikes a happy balance!

Your elderly patient may narrow down his food range to the point where foods high in protein, vitamins, and minerals are virtually eliminated. These ideas may help you show him how to enjoy a better-balanced diet.

These are essential—

Meat is as important now as ever. Fish steaks, chicken parts, chops, or cutlets can be bought in small portions. And adding skim milk powder to hamburger boosts both protein and calcium.

Plenty of fruits and vegetables mean adequate vitamins in proper balance. Chopped or strained vegetables and canned fruits are easy to chew. Salads need no cooking—but a sprig of parsley isn't enough.

Be sure the fluid intake is liberal. And remind your patient that it need not necessarily be water.

These are for fun—

Good company and a pretty plate make a happy combination. But if your patient eats alone, a tray in a sunny window makes all outdoors the guest.

A one-dish casserole gives free rein to the imagination and cuts down dishwashing. But perk up flavor with spices and herbs.

Beverages of moderate alcoholic content before dinner and at bedtime often aid appetite and may induce a better night's sleep.

The number of people over 60 is still on the upswing. And with proper attention to diet, these added years can be made more profitable and happy both for the elderly and their families.



United States Brewers Foundation

Beer—America's Beverage of Moderation

Sodium 17 mg, Calories 104/8 oz. glass

(AVERAGE OF AMERICAN BEERS)

If you'd like reprints of 12 different diets, please write United States Brewers Foundation, 535 Fifth Avenue, New York 17, N. Y.



Particularly now...

Why is **KENT** the one fundamentally different filter cigarette?

The more brands of filter cigarettes that are introduced—the more innovations in filtering—the clearer becomes the difference in KENT. Consider for a moment why.

Only KENT, of all filter brands, goes to the extra expense to bring smokers the famous Micronite Filter. All others rely solely on cotton, paper or some form of cellulose.

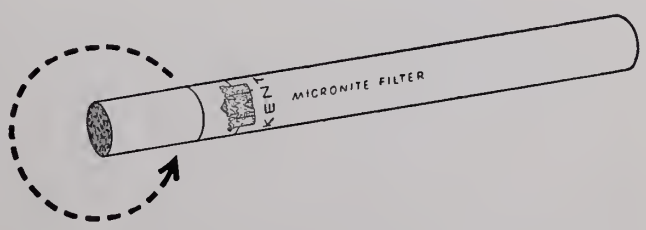
Indeed, the material in KENT's Micronite Filter is the choice in *many* places where filter requirements are most exacting.

With such filtering efficiency, it is understandable why KENT with the Micronite Filter takes out even microscopic particles —why KENT is *proved* effective in impartial scientific test after test.

Taste will tell the rest of the story. For KENT's flavor is not only light and mild. It stays fresh-tasting, cigarette after cigarette.

May we suggest you evaluate KENT for yourself, doctor? We firmly believe that, with the first carton, you will reach the same conclusion. As always, there is a difference in KENT. And now more than ever before.

KENT
with exclusive
MICRONITE
FILTER



"KENT" AND "MICRONITE" ARE REGISTERED TRADEMARKS OF P. LORILLARD COMPANY

UNSURPASSED

HYPOALLERGENIC

SOYA FORMULA

MILK-FREE

FOR INFANTS

. . . due to exclusive formulation and dramatic new processing methods

Physical advantages

- pleasant, bland flavor . . . no "burned or raw bean" taste . . . color is light, appetizing, "formula-like."
- exceptionally well tolerated . . . stools satisfactory . . . does not cause diarrhea or other gastrointestinal disturbances . . . babies take feedings well.
- easy to prepare—1 part Liquid Sobee to 1 part water for a formula supplying 20 calories per fluid ounce.

Nutritional advantages

- Liquid Sobee® is a well balanced formula, not a mere "soybean milk" . . . caloric distribution based on authoritative recommendations for infant formulas . . . no added carbohydrate needed.
- new processing methods prevent usual destruction of amino acids and important B vitamins . . . Liquid Sobee supplies 4.8 mg. of iron per quart of normal dilution.

The important first step in management of infant food sensitivities is Liquid Sobee. Because milk is the most common offender,[1,2,3,4] many physicians start infants on Liquid Sobee at the slightest suspicion of food allergy.

Available in 15½ fl. oz. cans

(1) Butler, A. M., and Wolman, I. J.: Quart. Rev. Pediat. 9: 63, 1954. (2) Moore, I. H.: Journal-Lancet 74: 80, 1954. (3) Collins-Williams, C.: J. Pediat. 45: 337, 1954. (4) Clein, N. W.: Ann. Allergy 9: 195, 1951.

LIQUID SOBEE

MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA, U.S.A. MEAD

FFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

VIRGINIA MEDICAL MONTHLY

Contents

The County Society, Its Duties and Responsibilities, Walter B. Martin . . . 257

Management of Chronic Glomerulonephritis, Guy W. Daugherty . . . 261

The Significance of Hematuria, Austin I. Dodson, Austin I. Dodson, Jr. . . .264

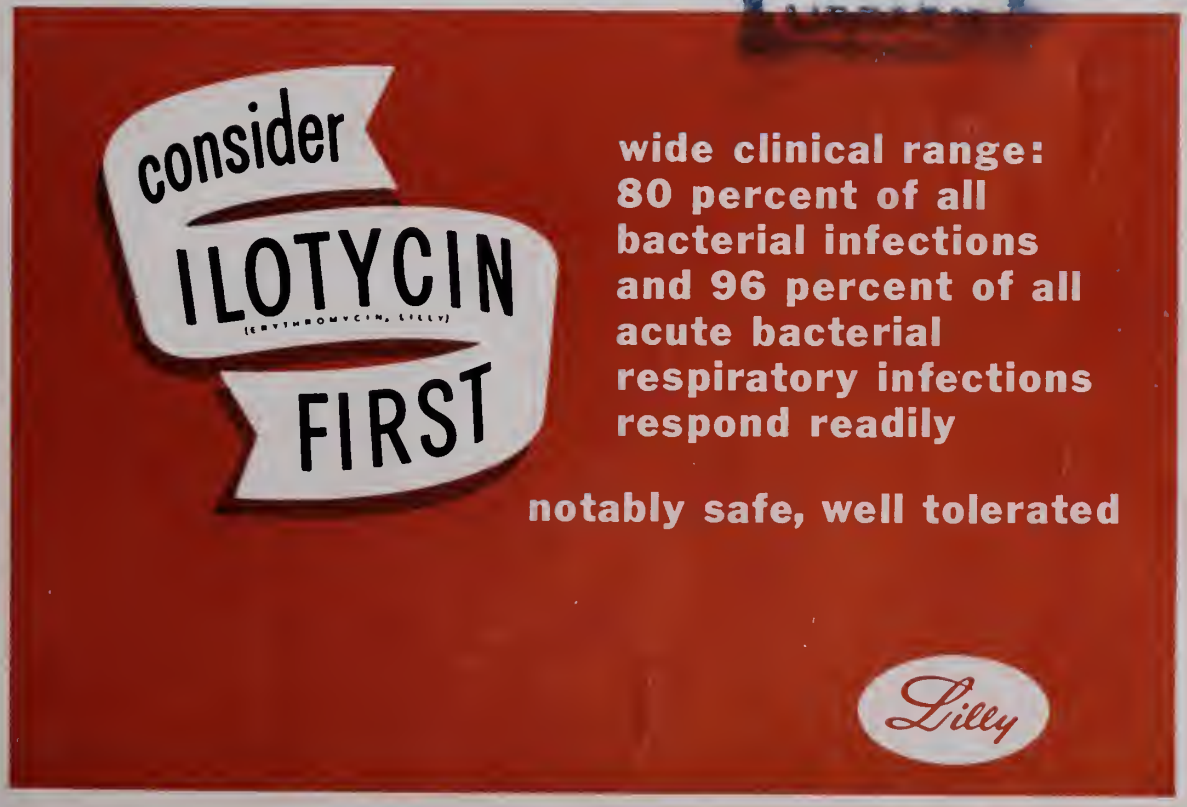
The Medical Care of Acute Poliomyelitis, R. Cannon Eley . . . 267

Drug Therapy of Parkinsonism, Thomas C. Fleming . . . 276

Allergic Reaction to Pantothenic Acid, Asher A. Friedman . . . 280

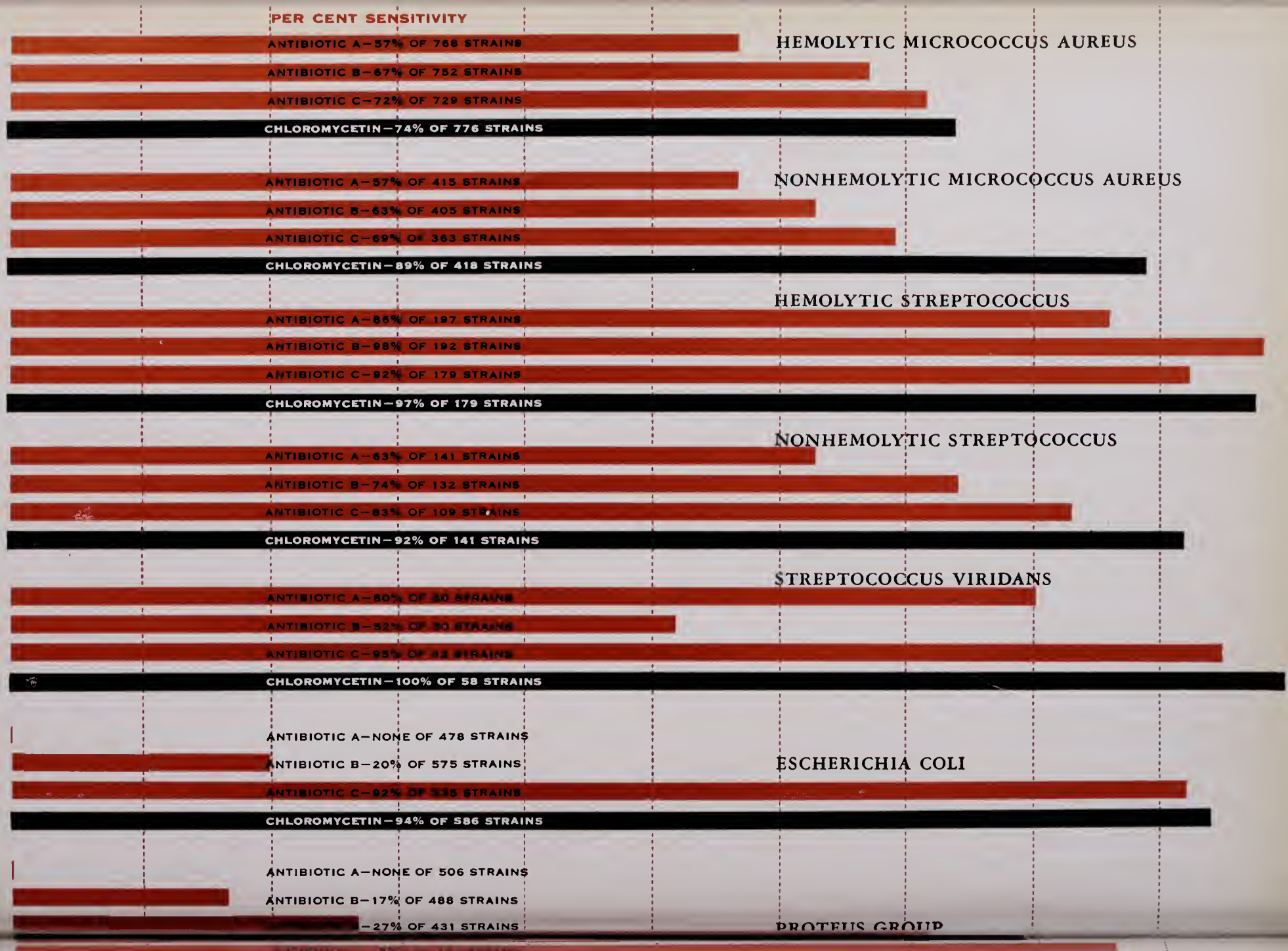
(Continued on page 6)

THE N.Y. ACADEMY OF MEDICINE
JUN -8 1955

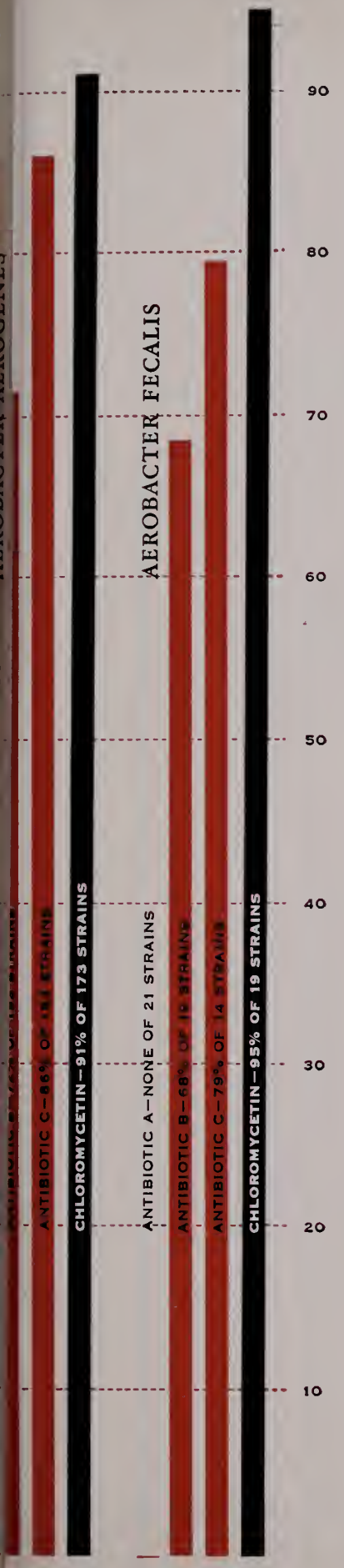


THE MEDICAL SOCIETY OF VIRGINIA
RICHMOND, OCTOBER 16-19, 1955

JUNE, 1955


PER CENT SENSITIVITY
HEMOLYTIC MICROCOCCUS AUREUS
ANTIBIOTIC A—57% OF 768 STRAINS
ANTIBIOTIC B—67% OF 752 STRAINS
ANTIBIOTIC C—72% OF 729 STRAINS
CHLOROMYCETIN—74% OF 776 STRAINS
NONHEMOLYTIC MICROCOCCUS AUREUS
ANTIBIOTIC A—57% OF 415 STRAINS
ANTIBIOTIC B—63% OF 405 STRAINS
ANTIBIOTIC C—69% OF 363 STRAINS
CHLOROMYCETIN—89% OF 418 STRAINS
HEMOLYTIC STREPTOCOCCUS
ANTIBIOTIC A—86% OF 197 STRAINS
ANTIBIOTIC B—98% OF 192 STRAINS
ANTIBIOTIC C—92% OF 179 STRAINS
CHLOROMYCETIN—97% OF 179 STRAINS
NONHEMOLYTIC STREPTOCOCCUS
ANTIBIOTIC A—63% OF 141 STRAINS
ANTIBIOTIC B—74% OF 132 STRAINS
ANTIBIOTIC C—83% OF 109 STRAINS
CHLOROMYCETIN—92% OF 141 STRAINS
STREPTOCOCCUS VIRIDANS
ANTIBIOTIC A—80% OF 30 STRAINS
ANTIBIOTIC B—52% OF 30 STRAINS
ANTIBIOTIC C—95% OF 22 STRAINS
CHLOROMYCETIN—100% OF 58 STRAINS
ESCHERICHIA COLI
ANTIBIOTIC A—NONE OF 478 STRAINS
ANTIBIOTIC B—20% OF 575 STRAINS
ANTIBIOTIC C—92% OF 535 STRAINS
CHLOROMYCETIN—94% OF 586 STRAINS
PROTEUS GROUP
ANTIBIOTIC A—NONE OF 506 STRAINS
ANTIBIOTIC B—17% OF 488 STRAINS
ANTIBIOTIC C—27% OF 431 STRAINS

sensitivity of common pathogens to CHLOROMYCETIN and three other major antibiotic agents



more effective against more strains...

Chloromycetin®

for today's problem pathogens

Because of the increasing emergence of pathogenic strains resistant to commonly used antibiotics, judicious selection of the most effective agent is essential to successful therapy. In vitro sensitivity studies serve as a valuable guide to the antibiotic most likely to be most effective. Both clinical experience and sensitivity studies indicate the greater antibacterial efficacy of CHLOROMYCETIN (chloramphenicol, Parke-Davis) in the treatment of many common infections.

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

Adapted from Altemeier, W. A.; Culbertson, W. R.; Sherman, R.; Cole, W.; Elstun, W., & Fultz, C. T.: *J.A.M.A.* 157:305 (Jan. 22) 1955.

MEDICAMENTA VERA

Parke, Davis & Company
DETROIT, MICHIGAN

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April 1874)

Published monthly by The Medical Society of Virginia.

PUBLICATION COMMITTEE

Lewis H. Bosher, Jr., M.D., *Chairman and Editor*

Wyndham B. Blanton, M.D. Lloyd B. Burk, M.D.

with

EDITORIAL BOARD

J. Morrison Hutcheson, M.D.

Cato Drash, M.D.

Ennion S. Williams, M.D.

A. Brownley Hodges, M.D.

Hugh H. Trout, Jr., M.D.

The MONTHLY is not responsible for the opinions and statements of its contributors.

All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

Managing Editor—E. SPENCER WATKINS
1105 West Franklin Street, Richmond 20.

Annual Subscription—$2.00 Single Copies—25¢

Second-class mail privileges authorized at Richmond, Virginia

THE MEDICAL SOCIETY OF VIRGINIA

OFFICERS

President—CARRINGTON WILLIAMS, M.D., Richmond

President-Elect—JAMES P. KING, M.D., Radford

Vice-Presidents—JAMES W. LOVE, M.D., Alexandria
WAVERLY R. PAYNE, M.D., Newport News
BENJAMIN W. RAWLES, JR., M.D., Richmond

Executive Secretary-Treasurer—ROBERT I. HOWARD, Richmond

Councilors—A. A. CREECY, M.D., Newport News
WALTER P. ADAMS, M.D., Norfolk
GUY W. HORSLEY, M.D., Richmond
W. J. OZLIN, M.D., South Hill
L. P. BAILEY, M.D., Nathalie
FRANK A. FARMER, M.D., Roanoke
H. W. MILLER, M.D., Woodstock
McLEMORE BIRDSONG, M.D., Charlottesville
JAMES P. WILLIAMS, M.D., Richlands
HARRY C. BATES, JR., M.D., Arlington

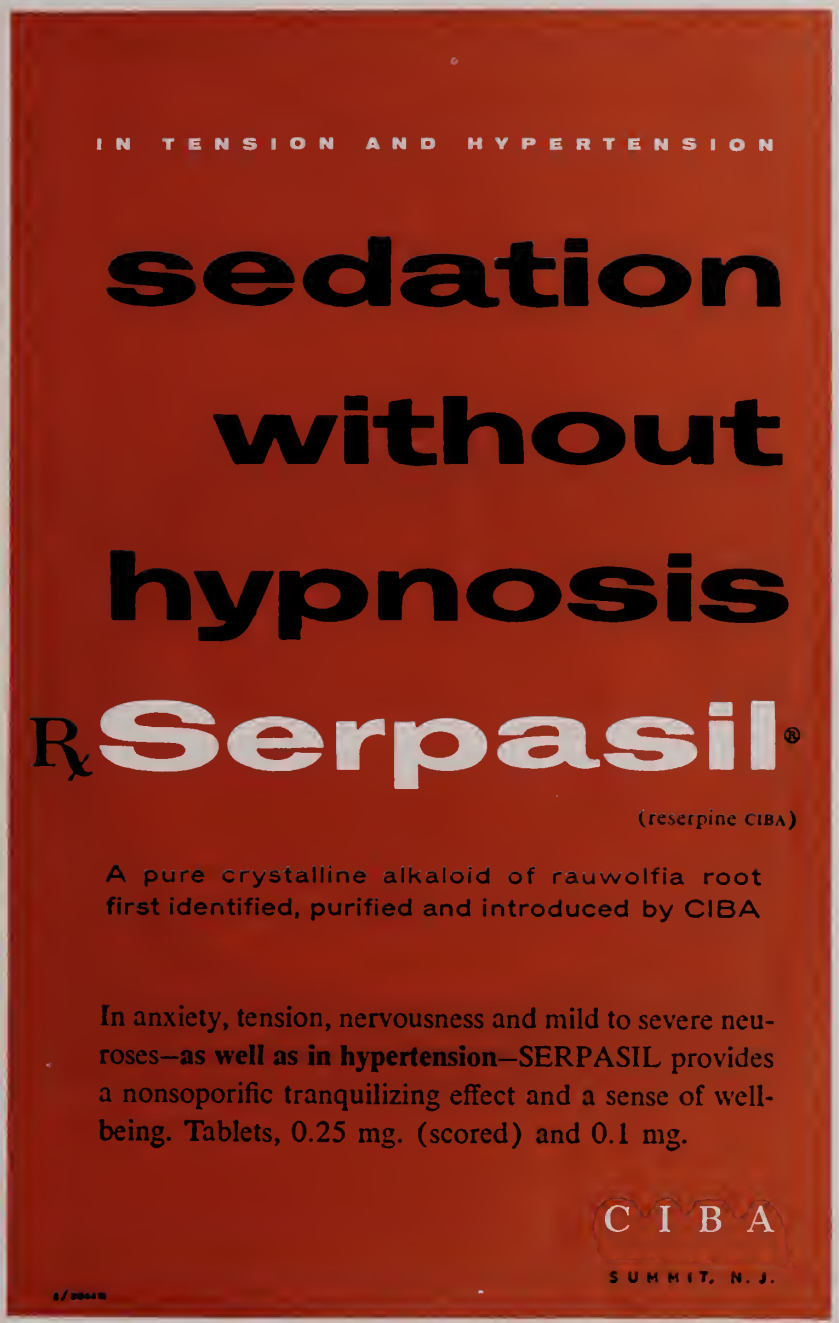
Delegates to A.M.A.
J. M. HUTCHESON, M.D., Richmond
VINCENT W. ARCHER, M.D., Charlottesville

Alternate Delegates to A.M.A.
ALLEN BARKER, M.D., Roanoke
W. LINWOOD BALL, M.D., Richmond

Executive Office—1105 W. Franklin St., Richmond 20.

INDEX TO ADVERTISERS

Abbott Laboratories ---- 13, 21, 42, 43
American Medical Association ---- 46
Ames Company, Inc. ---- 49
Appalachian Hall ---- 33
Baker Laboratories, Inc., The ---- 15
Burroughs Wellcome & Co. ---- 46, 47
Canada Dry Ginger Ale, Inc. ---- 12
Ciba ---- 5
Coca-Cola ---- 10
Corn Products Refining Company ---- 38
Davies, Rose & Co., Ltd. ---- 48
Foot-so-Port Company ---- 44
Garst Bros. Dairy Inc. ---- 6
Geigy Pharmaceuticals ---- 14
General Electric ---- 22
Gill Memorial Eye, Ear and Throat Hospital, Inc. ---- 28
Imperial Car Distributors, Inc. ---- 23
Jefferson, A. G. ---- 12
Johnston-Willis Hospital ---- 33
Kent Cigarettes ---- 20
Lakeside Laboratories, Inc. ---- 45
Lederle Laboratories Division ---- 16-17
Lilly and Company Eli ---- Front Cover, 26
McGuire Clinic—St. Luke's Hospital ---- 35
Mead Johnson & Company, Division of ---- 50
Medical Society of Virginia, The ---- 4, 46, 48
Medical College of Virginia ---- 33
New York Polyclinic Medical School and Hospital, The ---- 10
Parke, Davis & Company ---- 2-3
Patterson's Safe Service Drug Stores ---- 12
People's Service Drug Stores, Inc. ---- 8
Pfizer Laboratories ---- 7, 37
Plyler's Nursing Home, Mrs. ---- 30
"Premarin" ---- 6
Richmond Eye Hospital, Richmond Ear, Nose and Throat Hospital ---- 30
Richmond Hotels Incorporated ---- 44
Riverside Convalescent Home ---- 31
Riverside Hospital ---- 28
Saint Albans ---- 32
Schering Corporation ---- 24-25
Schieffelin & Company ---- 48
Sealy Mattress Company ---- 47
Searle & Co., G. D. ---- 27
State Board of Medical Examiners of Virginia, The ---- 48
St. Elizabeth's Hospital ---- 29
Stuart Circle Hospital ---- 29
Terrace Hill Nursing Home, Inc. ---- 35
Thompson Homestead School, The ---- 48
Tucker Hospital Inc. ---- 32
United States Brewers Foundation ---- 19
Upjohn Company, The ---- 9, 39
Valentine Company, Inc. ---- 44
Viceroy Cigarettes ---- 40
Virginia Bakers Council, The ---- 18
Westbrook Sanatorium ---- 31
White Cross Hospital ---- 34
Williams Printing Co. ---- 36
Wine Advisory Board ---- 41
Winthrop-Stearns, Inc. ---- 11
Wyeth ---- 36



New! SERPASIL® ELIXIR
Each 4-ml. teaspoonful contains 0.2 mg. of Serpasil

GRADE A PASTEURIZED PRODUCTS

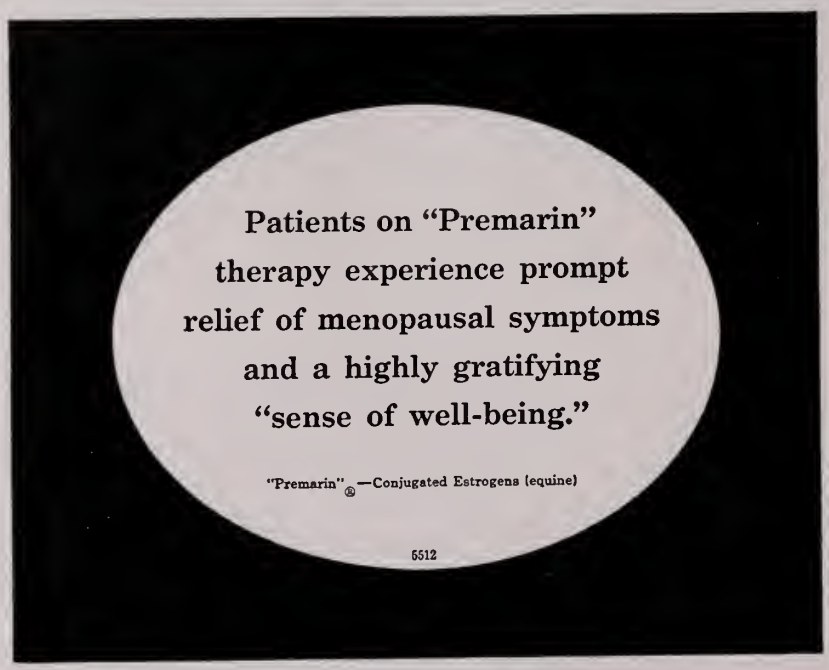
DIAL 5501

GRADE A MILK
HOMOGENIZED MILK (Natural Vitamin D added)
GOLDEN GUERNSEY MILK
GOLDEN FLAKE BUTTERMILK
SKIM MILK—COFFEE CREAM
WHIPPING CREAM—COTTAGE CHEESE
DARI-RICH CHOCOLATE MILK
GARST BROS. DAIRY BUTTER

"ROANOKE'S MOST MODERN DAIRY"

DIAL 5501

LABORATORY CONTROL FOR YOUR PROTECTION



CONTENTS
(Continued)

Medico-Legal Notes	281
Mental Health	283
Public Health	286
Medical Society of Virginia, The	288
Woman's Auxiliary	291
Book Announcements	292
President's Message	293
Editorial	294
Society Proceedings	296
News	297
Obituaries	298

INDEX TO ADVERTISERS—Page 4

Entered as Second Class Matter at the Postoffice, Richmond, Va.

for happy travel



BONAMINE* HCl

Brand of meclizine hydrochloride

chewing tablets

the NEWEST prescription for travel freedom from motion sickness

BONAMINE CHEWING TABLETS—provide motion-sickness medication which

(1) is pleasantly mint flavored, acceptable to children and adults who dislike taking pills
(2) is rapidly effective (most of the medication is extracted by 5 minutes of chewing)
(3) requires no water for administration
(4) promotes salivation and maintains the normal downward gastrointestinal gradient.

BONAMINE in a single oral dose of 25 to 50 mg. has a remarkably prolonged action—9 to 24 hours. Notably free from side reactions.

BONAMINE medication is also indicated for the control of vertigo associated with vestibular and labyrinthine disturbances, cerebral arteriosclerosis, radiation therapy, Menière's syndrome and fenestration procedures.

BONAMINE CHEWING TABLETS contain 25 mg. of Bonamine each and are supplied in packets of 8, individually wrapped.

Also supplied as BONAMINE TABLETS of 25 mg. each, scored and tasteless, in boxes of 8 and bottles of 100 and 500.

*Trademark

Pfizer

PFIZER LABORATORIES, Brooklyn 6, N. Y.
Division, Chas. Pfizer & Co., Inc.

One of a Series of Newspaper Ads Directed to Your Patients and Our Customers....

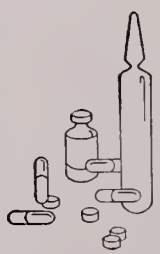
THANKS TO YOUR DOCTOR

some allergies are no longer something... ...to sneeze at



Medical science has learned much about allergies. New drugs help your doctor relieve allergy distress—irritation, weeping, sneezing, gasping, wheezing, rash and itching. Proper medical attention, immunization and other precautions brighten prospects for allergic folks.

Peoples cooperates with your doctor by making available at all times the newest drugs, and by dispensing them quickly and accurately. And, of course, your prescription is priced with uniform economy at Peoples Service Drug Store.



PEOPLES *Certified* **PRESCRIPTIONS**

AT ALL PEOPLES SERVICE DRUG STORES

...just what the doctor ordered

© 1955 PEOPLES DRUG STORES, INC.

Upjohn

Intra-articular treatment of arthritis, bursitis . . .

Each cc. contains:
Hydrocortisone acetate. . . .50 mg.
Physiological salt solution. . . .q.s.
(containing 4 mg. polysorbate 80 and 5 mg. carboxymethylcellulose)
Preserved with benzyl alcohol 0.9%

Supplied:
5 cc. vials

*REGISTERED TRADEMARK FOR THE UPJOHN BRAND OF HYDROCORTISONE (COMPOUND F)

THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN

Cortef* *suspension*

STERILE, AQUEOUS



Relax the best way ... pause for Coke



Time out for refreshment

DRINK Coca-Cola
REG. U.S. PAT. OFF.



THE NEW YORK POLYCLINIC
MEDICAL SCHOOL AND HOSPITAL

(Organized 1881)

(The Pioneer Post-Graduate Medical Institution in America)

OBSTETRICS and GYNECOLOGY

A two months full time course. In Obstetrics: lectures, prenatal clinics; attending normal and operative deliveries; detailed instruction in operative obstetrics (manikin). X-ray diagnosis in obstetrics and gynecology. Care of the newborn. In Gynecology: lectures; touch clinics; witnessing operations; examination of patients pre-operatively; follow-up in wards post-operatively. Obstetrical and gynecological pathology. Culdoscopy. Studies in Sterility. Anesthesiology. Attendance at conferences in obstetrics and gynecology. Operative gynecology on the cadaver.

Course for GENERAL PRACTITIONERS

Intensive full time instruction covering those subjects which are of particular interest to the physician in general practice. Fundamentals of the various medical and surgical specialties designed as a practical review of established procedures and recent advances in medicine and surgery. Subjects related to general medicine are covered and the surgical departments participate in giving fundamental instruction in their specialties. Pathology and radiology are included. The class is expected to attend departmental and general conferences.

SURGERY and ALLIED SUBJECTS

A two months full time combined surgical course comprising general surgery, traumatic surgery, abdominal surgery, gastroenterology, proctology, gynecological surgery, urological surgery. Attendance at lectures, witnessing operations, examination of patients preoperatively and postoperatively and follow-up in the wards postoperatively. Pathology, radiology, physical medicine, anesthesia. Cadaver demonstrations in surgical anatomy, thoracic surgery, proctology, orthopedics. Operative surgery and operative gynecology on the cadaver. Attendance at departmental and general conferences.

ANATOMY — SURGICAL

a. ANATOMY COURSE for those interested in preparing for Surgical Board Examination. This includes lectures and demonstrations together with supervised dissection on the cadaver.
b. SURGICAL ANATOMY for those interested in a general Refresher Course. This includes lectures with demonstrations on the dissected cadaver. Practical anatomical application is emphasized.
c. OPERATIVE SURGERY (cadaver). Lectures on applied anatomy and surgical technic of operative procedures on cadaver under supervision.
d. REGIONAL ANATOMY for those interested in preparing for Subspecialty Board Examinations.

For Information concerning these and other Courses please Address:

THE DEAN. 345 West 50th St., New York 19. N. Y.

Calm, Relaxed AND *Awake*

MEBARAL®

BRAND OF MEPHOBARBITAL

for the hyperexcitability so often found in

hypertension
hyperthyroidism
convulsive disorders
difficult menopause
psychoneurosis
hyperhidrosis

Mebaral's soothing sedative effect is obtained without significantly clouding the patient's mental faculties.

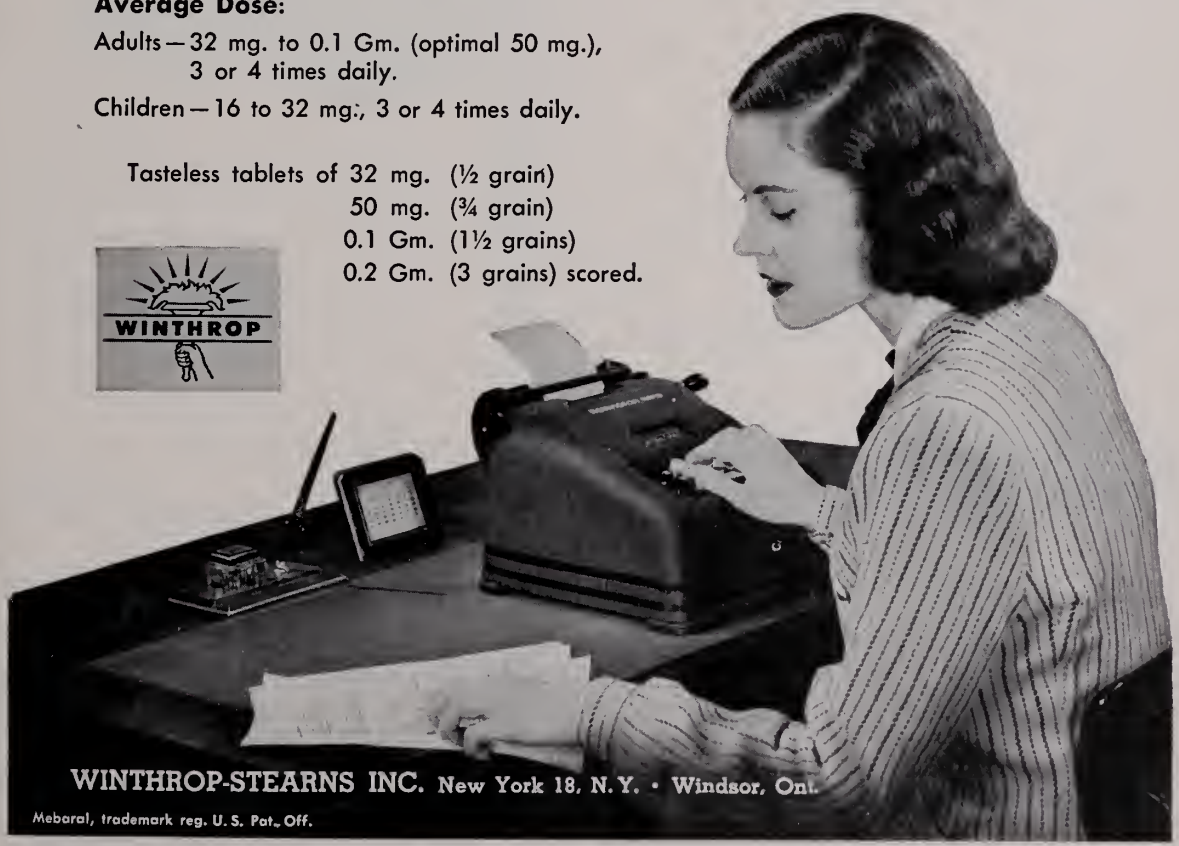
Average Dose:

Adults—32 mg. to 0.1 Gm. (optimal 50 mg.), 3 or 4 times daily.

Children—16 to 32 mg., 3 or 4 times daily.

Tasteless tablets of 32 mg. (½ grain)
50 mg. (¾ grain)
0.1 Gm. (1½ grains)
0.2 Gm. (3 grains) scored.

WINTHROP



WINTHROP-STEARNS INC. New York 18, N.Y. • Windsor, Ont.

Mebaral, trademark reg. U.S. Pat. Off.

For the
Discriminating
Eye Physician

Depend on the Services of a Guild Optician

in
Lynchburg, Virginia

A. G. JEFFERSON
Ground Floor Allied Arts Bldg.

Exlusively Optical

At All

DEPENDABLE

PRESCRIPTION SERVICE

and

SERVICE TO PHYSICIANS

PATTERSON'S
SAFE SERVICE DRUG STORES

Prescription Specialists

Lynchburg, Va. Martinsville, Va.
Danville, Va. Altavista, Va.
Winston-Salem, N. C.

...from Two
Outstanding Cases

RED LABEL • BLACK LABEL
Both 86.8 Proof



Johnnie Walker stands out in its devotion to quality. Every drop is made in Scotland. Every drop is distilled with the skill and care that come from generations of fine whisky-making. And every drop of Johnnie Walker is guarded all the way to give you *perfect* Scotch whisky... the same high quality the world over.



BORN 1820...
STILL GOING STRONG

JOHNNIE WALKER
BLENDED SCOTCH WHISKY

CANADA DRY GINGER ALE, Inc., New York, N. Y., *Sole Importer*

when patients complain of itching, scaling, burning scalps—or when you spot these symptoms of seborrheic dermatitis—you can be sure of quick, lasting control when you prescribe

SELSUN®

for your seborrheic dermatitis patients



controls 81-87% of all seborrheic dermatitis, 92-95% of all dandruff cases. Once scaling is controlled, SELSUN keeps the scalp healthy for one to four weeks with simple, pleasant treatments. In 4-fluid-ounce bottles, available on prescription only. Abbott

506127

® SELSUN Sulfide Suspension / Selenium Sulfide, Abbott

in arthritis
and
allied disorders...



nonhormonal anti-arthritic

BUTAZOLIDIN®

(brand of phenylbutazone)

relieves pain • improves function • resolves inflammation

Employing the serum protein-polysaccharide ratio (PR) as an objective criterion of rheumatoid activity, it has again been shown that BUTAZOLIDIN "...produces more than a simple analgesic effect in rheumatoid arthritis."[1]

Clinically, the potency of BUTAZOLIDIN is reflected in the finding that 57.6 per cent of patients with rheumatoid arthritis respond to the extent of "remission" or "major improvement."[2]

Long-term study has now shown that the failure rate with BUTAZOLIDIN in rheumatoid arthritis, and particularly in rheumatoid spondylitis, is significantly lower than with hormonal therapy.[3]

(1) Payne, R. W.; Shetlar, M. R.; Farr, C. H.; Hellbaum, A. A., and Ishmoel, W. K.: J. Lob. & Clin. Med. *45*:331, 1955. (2) Bunim, J. J.; Williams, R. R., and Black, R. L.: J. Chron. Dis. *1*:168, 1955. (3) Holbrook, W. P.: M. Clin. North America *39*:405, 1955.

BUTAZOLIDIN® (brand of phenylbutazone). Red coated tablets of 100 mg.

BUTAZOLIDIN being a potent therapeutic agent, physicians unfamiliar with its use are urged to send for literature before instituting therapy.

GEIGY PHARMACEUTICALS Division of Geigy Chemical Corporation
220 Church Street, New York 13, N. Y.
In Canada: Geigy Pharmaceuticals, Montreal

51155

Geigy

Send home



a well-nourished, happy baby

When you feed your babies on Baker's Modified Milk, you are assuring yourself and the infant's parents a well-nourished baby.

Baker's is not an ordinary canned milk. It is a completely prepared milk formula designed to produce the nutritional results of mother's milk.

Baker's is made from cow's milk of the highest quality—Grade A—which conforms with the sanitary requirements of the United States Public Health Service Milk Ordinance & Code. In this respect Baker's Modified Milk is *exclusive* in the field of proprietary milks.

All other ingredients—vegetable and animal fats, carbohydrate, and synthetic vitamins—are of the highest quality. Manufacturing controls are rigid and meticulous—assuring a clean, safe, milk from source of supply to the time of formula preparation.

And there is little chance of error in preparing the formula—simply dilute Baker's to the prescribed strength with water, previously boiled.

Baker's Modified Milk is supplied gratis to all hospitals. Tell the nursery supervisor to put your babies on Baker's.



BAKER'S MODIFIED MILK

Made from grade A milk (U.S. Public Health Service Milk Code) which has been modified by replacement of the milk fat with vegetable and animal fats and by the addition of carbohydrates, vitamins and iron.

Baker's Modified Milk

THE BAKER LABORATORIES, INC.

Milk Products Exclusively for the Medical Profession

MAIN OFFICE: CLEVELAND 3, OHIO **PLANT: EAST TROY, WISCONSIN**

MORE AND MORE PHYSICIANS ARE TURNING TO



ACHRO

WHEN A BROAD-SPECTRUM ANTIBIOTIC IS INDICATED

Lederle



MYCIN*

HYDROCHLORIDE
TETRACYCLINE HCl *LEDERLE*

Within the first few months of its introduction, ACHROMYCIN was being widely prescribed. Each succeeding month has seen its usage increase as more physicians have come to know and value ACHROMYCIN in its many dosage forms.

More than a year of widespread use has established ACHROMYCIN as a true broad-spectrum antibiotic, well tolerated by both young and old. It has proved effective against a wide variety of infections caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa. Compared to certain other antibiotics, ACHROMYCIN provides more rapid diffusion; it is also more soluble, and, once in solution, more stable.

Truly, ACHROMYCIN has become a major weapon in the fight against disease.

ERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* Pearl River, New York

*REG. U.S. PAT OFF.



THE nationwide average retail price of 5½ ounces of enriched bread (the estimated average daily consumption) is approximately 5.8 cents.[3] This small fraction of America's food dollar has been responsible for notable gains in mass nutrition and health.[2] The National Research Council and the American Medical Association's Council on Foods and Nutrition have recently reaffirmed their endorsement of the enrichment of bread in the light of "good evidence that enriched bread has been beneficial to the public."[1]

Column I of the appended table shows the amounts of nutrients and nutrient energy provided by 5½ ounces of enriched bread. Column II gives the percentages of the recommended daily dietary allowance[4] available from this amount of enriched bread.

CONTRIBUTION OF 5½ OUNCES OF ENRICHED BREAD...

	Nutrients and Calories	Percentages of Allowances (1953)[4]
Protein	13.2 Gm.	20%
Thiamine	0.37 mg.	26%
Niacin	3.4 mg.	24%
Riboflavin	0.23 mg.	14%
Iron	4.1 mg.	34%
Calcium (overage)	137 mg.	17%
Calories	418	14%

It is evident that enriched bread furnishes substantially more than its share of most nutrients. Thus it compensates for deficiencies of these nutrients in other foods of the everyday diet. Since virtually all enriched bread is made with nonfat milk solids, its protein—containing an average of 10.5 per cent milk protein and 89.5 per cent wheat and yeast proteins[5]—functions for growth as well as tissue maintenance.

Enriched bread might well be considered a basic food in maintaining the high nutritional status of the American people, yet it can be purchased for so small a percentage of the American food dollar.

---

1. Council on Foods and Nutrition, American Medical Association: A Statement of General Policy Concerning the Addition of Specific Nutrients to Foods, J.A.M.A. *154:*145 (Jan. 9) 1954.
2. Sebrell, W.H.: Trends and Needs in Nutrition, J.A.M.A. *152:*42 (May 2) 1953.
3. Bureau of Labor Statistics, United States Department of Labor, Jan., 1954.
4. Shank, R.E.: Revisions of the Recommended Dietary Allowances, J. Am. Dietet. A. *30:*105 (Feb.) 1954.
5. Sherman, H.C.: Chemistry of Food and Nutrition, ed. 8, New York, The Macmillan Co., 1952, pp. 212, 599.

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

THE VIRGINIA BAKERS COUNCIL
In co-operation with
THE AMERICAN BAKERS ASSOCIATION

Bulk makes the "Regularity" Diet work!



Rough or gentle, bulk for the ordinary "regularity" diet comes from the cellulose of foods plus a liberal fluid intake. Where roughage is needed, foods may be eaten raw or cooked. In the bland diet, fruits can be stewed and vegetables puréed.

These are for bulk—

Fruits and vegetables are high in cellulose. And fruits like oranges and apples, root vegetables like beets and carrots also provide pectin which absorbs even more fluid to form especially smooth, soothing bulk.

Whole grains—and the flour or meal made from them—not only contain cellulose, but provide Vitamin B complex as well.

And lots of liquid to make the cellulose bulky—about 8 to 10 glasses a day. But remind your patient that not all of it has to be water.

Team them up for appetite appeal—

Boiled beets take on new interest when they're served in a sauce of orange juice combined with sugar, cornstarch, and butter.

Apples team nicely with dates. Serve them diced with mayonnaise for salad. Or for dessert, stuff cored apples with dates and bake in orange juice.

Currants, raisins, or cranberries make a tasty surprise in oatmeal muffins.

When your patient learns that these bulk-producing foods can be made appetizing, he's likely to make them a part of his regular diet and so prevent recurrence of his condition.

United States Brewers Foundation

Beer—America's Beverage of Moderation

An 8-oz. glass of beer supplies about 1/8 of the minimum daily requirement of Niacin as well as smaller amounts of other B Complex vitamins. (Average of American beers)

If you'd like reprints of 12 different diets, please write United States Brewers Foundation, 535 Fifth Avenue, New York 17, N. Y.



Particularly now...

Why is **KENT** the one fundamentally different filter cigarette?

The more brands of filter cigarettes that are introduced—the more innovations in filtering—the clearer becomes the difference in KENT. Consider for a moment why.

Only KENT, of all filter brands, goes to the extra expense to bring smokers the famous Micronite Filter. All others rely solely on cotton, paper or some form of cellulose.

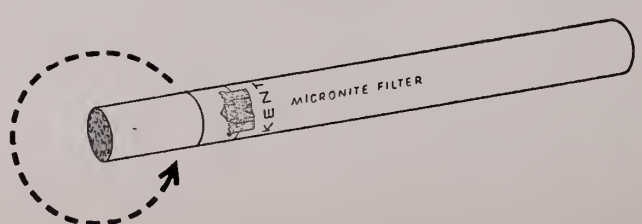
Indeed, the material in KENT's Micronite Filter is the choice in *many* places where filter requirements are most exacting.

With such filtering efficiency, it is understandable why KENT with the Micronite Filter takes out even microscopic particles —why KENT is *proved* effective in impartial scientific test after test.

Taste will tell the rest of the story. For KENT's flavor is not only light and mild. It stays fresh-tasting, cigarette after cigarette.

May we suggest you evaluate KENT for yourself, doctor? We firmly believe that, with the first carton, you will reach the same conclusion. As always, there is a difference in KENT. And now more than ever before.

KENT
with exclusive
MICRONITE
FILTER



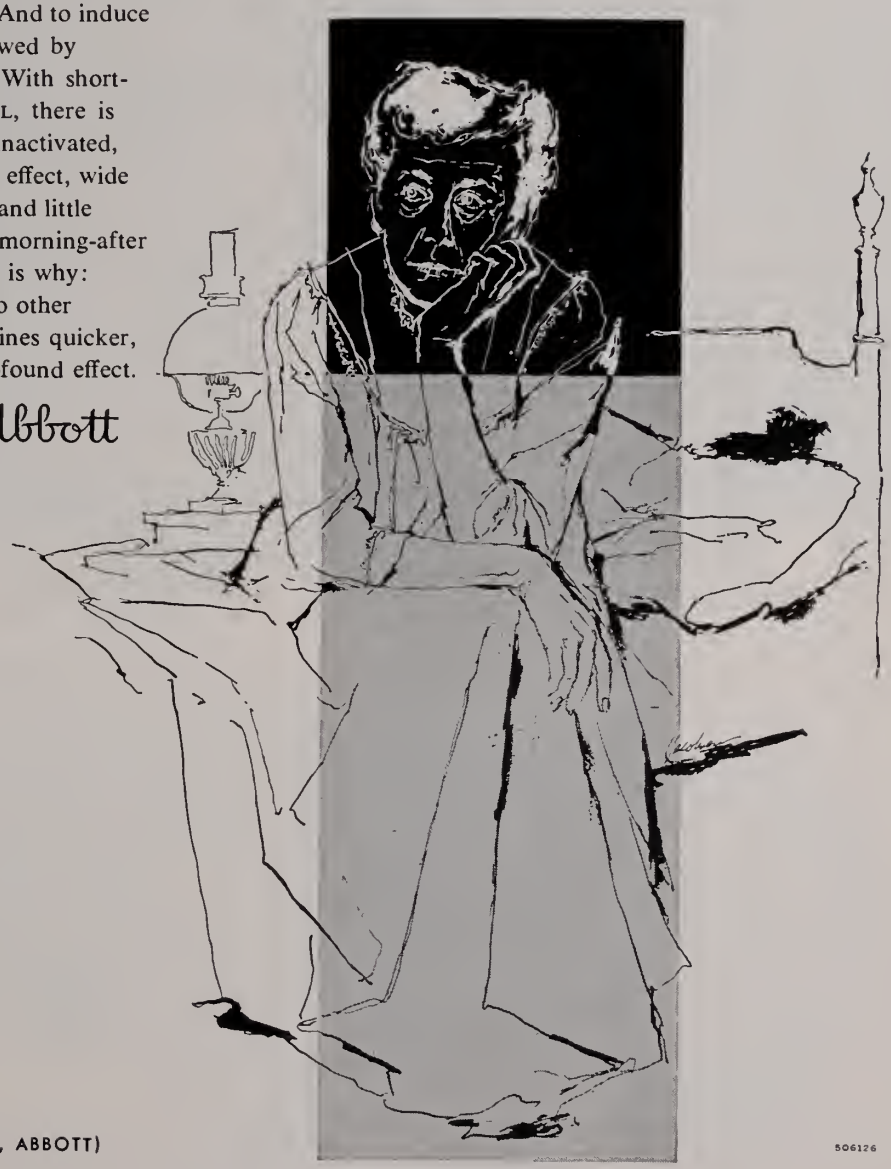
"KENT" AND "MICRONITE" ARE REGISTERED TRADEMARKS OF P. LORILLARD COMPAI

It's well past midnight. Again.
And still her night keeps
ticking away: no sleep . . . no
rest . . . no sleep . . . no rest.
If she were your patient, you'd
relieve her insomnia with—

short-acting **NEMBUTAL®**

A dose of only ¾ to 1-gr.
is enough to erase anxiety,
worries, tension. And to induce
drowsiness, followed by
refreshing sleep. With short-
acting NEMBUTAL, there is
little drug to be inactivated,
short duration of effect, wide
margin of safety and little
tendency toward morning-after
hangover. Which is why:
in equal doses, no other
barbiturate combines quicker,
briefer, more profound effect.

Abbott



® (PENTOBARBITAL, ABBOTT)

506126

Now! G-E offers you a 200-ma x-ray unit

for only
$4900
F.O.B. Milwaukee. Subject to change without notice.



YOU don't have to be handicapped by under-powered, inflexible x-ray apparatus. General Electric not only gives you the Maxicon ASC — *a full-length table of rigid construction* — but also offers you all this for complete fluoroscopic and radiographic facilities: a new simplified 200-ma control unit . . . a new lightweight rotating-anode tube . . . a new full-wave x-ray transformer

That $4900 price includes, in addition, electronic timing, 1/20 to 10 seconds . . . 8:1 Bucky diaphragm . . . and fluoroscopic screen. At extra cost — motor-drive table angulation, spot-film device and 16:1 Bucky diaphragm.

Now's the time to step up your radiographic facilities. And, remember, you can get the Maxicon ASC — without initial capital investment—on the G-E Maxiservice® rental plan. For full information, see your G-E x-ray representative. Or, if you prefer, write X-Ray Department, General Electric Company, Milwaukee 1, Wisconsin. Ask for Pub. AM31.

Progress Is Our Most Important Product

GENERAL ELECTRIC

Direct Factory Branches:

RICHMOND — 3425 West Leigh St.
ROANOKE — 202 S. Jefferson Street
BALTIMORE — 2 W. Eager Street
WASHINGTON, D. C. — 806 15th St., N.W.
NORFOLK — 218 Flatiron Building

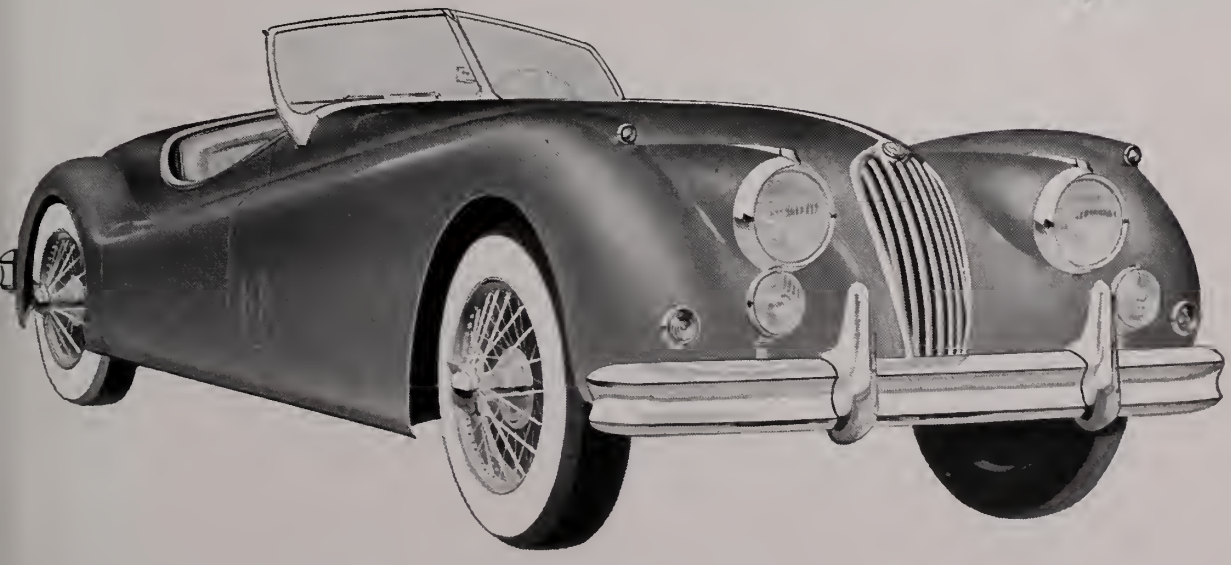
spice for life...

Developed in the toughest international races,
Jaguar is not only the world's fastest production car
... and the safest ... but the most fun to drive!
With its famed XK-140 engine,
now even more powerful ...
precision race car rack-and-pinion steering ...
oversize racing brakes ... enlarged cockpit
for greater comfort, Jaguar adds spice
to your life, fun to your driving!

Note: *Recently, a production model Jaguar was driven 7 days and 7 nights ... 16,851 miles at an average speed of over 100 mph. Yet after this grueling test technicians found it could pass new car inspection!*

JAGUAR

the finest car of its class in the world



XK-140 Sports Roadster, $3450 port of entry. Wire wheels, white walls extra.
Also, in Convertible and Coupe—now with 2 occasional seats in rear—and Mark VII-M Family Sports Sedan.
Going abroad? See your Jaguar dealer about money-saving overseas delivery.

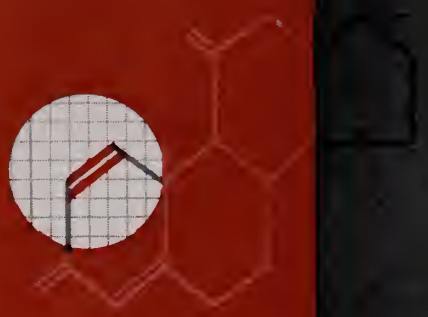
HARPER MOTORS, INC.
901 Preston Avenue
CHARLOTTESVILLE, VA.
Tel. 28191

FOREIGN CAR DIST. INC.
806 Granby Street
NORFOLK, VA.
Tel. 40663

IMPERIAL MOTORS OF FAIRFAX
Route 29
Nr. FALLS CHURCH, VA.
Tel. Jefferson 43302

IMPERIAL CAR DISTRIBUTORS, INC., Academy and Washington, HAMPTON, VA. Tel. 4383

announcing
a new era in
corticosteroid therapy



METICORTEN

PREDNISONE, SCHERING

new crystalline
adrenocorticoid
first discovered and
introduced by

Schering

In a planned search for more effective substances without undesirable actions, new crystalline corticosteroids have been discovered in Schering's research laboratories.

Possessing three to five times the therapeutic effectiveness of cortisone or hydrocortisone in rheumatoid arthritis and other so-called collagen diseases, intractable asthma and other allergies, and nephrosis, the first of these, METICORTEN* is less likely to produce undesirable side actions, particularly sodium retention and excessive potassium depletion. Patients treated with this new steroid exhibit less tendency to fluid retention, and sedimentation rate may be lowered even where other corticoids cease to be effective—"therapeutic escape." This new compound affords excellent relief of pain, swelling and tenderness, diminishes joint stiffness and is effective in small dosage.

METICORTEN, is available as 5 mg. scored tablets, bottles of 30. In the treatment of rheumatoid arthritis, dosage of METICORTEN begins with an average of 20 to 30 mg. (4 to 6 tablets) a day. This is gradually reduced by 2½ to 5 mg. until maintenance dosage of 5 to 20 mg. daily is reached, usually by the 14th day. The total 24-hour dose should be divided into 4 parts and administered *after meals and at bedtime*. Patients may be transferred directly from hydrocortisone or cortisone to METICORTEN without difficulty.

SCHERING CORPORATION • BLOOMFIELD, N. J.

SCHERING

*T.M. Schering

prevents postpartum hemorrhage
speeds uterine involution



'Ergotrate Maleate'

(ERGONOVINE MALEATE, U.S.P., LILLY)

. . . produces rapid and sustained contraction of the postpartum uterus

The administration of 'Ergotrate Maleate' almost completely eliminates the incidence of postpartum hemorrhage due to uterine atony. Administered during the puerperium, 'Ergotrate Maleate' increases the rate, extent, and regularity of uterine involution; decreases the amount and sanguineous character of the lochia; and decreases puerperal morbidity due to uterine infection.

Supplied:

Ampoules of 0.2 mg. in 1 cc.
Tablets of 0.2 mg.

Dosage: Generally, 0.2 to 0.4 mg. I.V. or I.M. immediately following delivery of placenta. Thereafter, 0.2 to 0.4 mg. three or four times daily for two weeks.

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.

The Virginia
MEDICAL
MONTHLY

June, 1955
Vol. 82, No. 6
Whole No. 1236

The County Society, Its Duties and Responsibilities

WALTER B. MARTIN, M.D.
Norfolk, Virginia

THIS is a historic occasion. For the first time, these two great neighboring medical associations have sat down together to consider the many problems that are of mutual concern. A peaceful army of the Potomac now occupies both banks of that great river. Our two populations are closely intermingled. It is often difficult to tell where Washington ends and Virginia begins. It is most fitting, therefore, that we should meet together for discussion for scientific subjects and consideration of certain social and economic problems that seriously concern us as physicians and that they may affect so gravely the medical welfare of our people. Organized medicine, whether national, state or local has a duty to society, just as we, the individual physicians, have a duty to our patients.

American medicine has gone far in the more than one hundred years since the founding of our national organization on May 7, 1847; the principles enunciated at that time and put into practice have not changed. There was then considerable debate as to whether the control of the national organization should be in the hands of a perpetuating body of officers and trustees or representatives of state and local societies. Fortunately, the second viewpoint prevailed and thus was expressed the conviction that is still maintained—the conviction that the sound and enduring basis of medicine in America lies in the local groups of physicians that are combined to form the state organizations. These, in turn, are combined in the federacy known as the American Medical Association. In the preamble to the Constitution drawn up at the organizational meeting of the American Medical Association, the following statement appeared as to its purpose, "For cultivating and advancing medical knowledge, for elevating the standards of medical education, for promoting the usefulness, honor and interest of the medical profession, for enlightening and directing public opinion in regard to the duties and responsibilities and requirements of medical men." These principles have continued to guide us. They are perhaps more briefly expressed in the second article of our Constitution which states that "the objects of the Association are to promote the science and art of medicine and the betterment of public health."

For those who have either actively opposed organized medicine or added little effort of support for its objectives, it might be well to refer them to the Presidential address of Doctor William H. Welsh, in 1910. In his concluding remarks, he stated, "Organized effort is a distinguishing mark of modern civilization. It is as essential for the advancement of science and education, of social and industrial reform, of philanthropic endeavor as for the promotion of commerce. This remarkable progress of medical science, especially during the last three decades, of man's power to control disease has been vastly increased and the sphere of usefulness of the physician has been correspondingly widened and with the advancing knowledge will continue to expand." He further stated, "Among the organized forces for advancing the prosperity, the happiness,

WALTER B. MARTIN, M.D., *President of the American Medical Association.*

Presented at the First Interstate Scientific Assembly of the Medical Society of the District of Columbia and The Medical Society of Virginia, Washington, D. C., November 3, 1954.

the well-being of the people of this country, the American Medical Association has an important part to play. We are justified in the confidence that with the united support and loyalty of the profession, this Association, broadly representative and standing for the best ideals of medical science and art, and for professional and civic righteousness, will contribute a beneficent share to the working-out of our national destiny."

The American Medical Association is made up of 53 constituent state and territorial societies, and these in turn are composed of 1932 county and district societies. Ours is not a closely knit organization. There is no line of authority extending down from the national to the state and to the county level. Duly elected delegates from your and other state societies elect their general officers and trustees and formulate the policies of the American Medical Association. Our national organization has no command function. It can urge you and inform you, but it cannot direct you. It is rather remarkable that under these circumstances that for over 100 years the influence of the American Medical Association has continued to expand. Through its councils and bureaus, it has been a moving force in every aspect of American medicine.

In order to accomplish its purposes, it encourages research, supports good teaching of medicine, endeavors to promote continued advances in both the prevention and treatment of disease. It must do more, however. It must improve and protect an environment necessary for the continued advance of the art and science of medicine. History records many instances where the advances of medicine have been halted and thrown back by changing economic and political conditions. If medicine is to continue to advance, the A.M.A. and the county society must work together and be mutually helpful.

The A.M.A. helps the individual physician and the county society in many ways. Through its Council on Medical Education and Hospitals, it stands guard over the portals of medicine and gives assurance to you and the American people that high standards of medical education are maintained. Class B schools have ceased to exist. Medical education as a whole is now at a higher level in the United States than in any other country in the world. This Council establishes standards for intern and residency training. It has brought about great improvement in post-graduate medical training and education. More recently, in conjunction with the American College of Surgeons, the American College of Physicians, the American Hospital Association, the Canadian Medical Association, the entire field of hospital inspection and standardization has been coordinated under a joint commission. The work of the Council assures the American people of a constant flow of highly trained physicians. The smooth working of this program of accreditation of hospitals requires support of local groups and societies and sympathetic understanding by the Commission and its representatives of local conditions and needs.

Through the Council on Scientific Assembly and the Bureau of Exhibits, the American Medical Association conducts a great educational program at its annual and interim meetings. These programs cover all the fields of medicine and provide a means by which physicians from all parts of the country can keep themselves abreast of modern medicine. Continued medical education is carried on by the Journal of the American Medical Association in its nine special journals that bring to your office weekly and monthly the latest advances in your profession. The organizational section of the Journal of the American Medical Association keeps you informed as to proposed and pending legislative activities affecting medicine and of the testimony of our representatives before the committees of the Congress. Its large reference library is at the service of each of our members who desire to consult it. The Quarterly Accumulative Index provides a ready reference access to related medical literature.

Through its Council on Pharmacy and Chemistry, it protects the physician and public against useless or dangerous drugs. The Council on Food and Nutrition and the Council on Physical Medicine and Rehabilitation offer the same protection in the field of foods, apparatus and appliances. The Bureau of Investigation, the Bureau of Legal Medicine, the Bureau of Health Education all render a great and useful service to you and your patients. With the great expansion of industry, there has come an increase in industrial hazards. The Council on Industrial Health is active in the study of such hazards and in advising as to means of elimination. This Council is not to be confused with the Committee on the Health of Industrial Workers which is concerned with the medical care aspect of the health of industrial workers.

There is another group of activities that is concerned with the problems of medical service. Many of these are grouped under the Council on Medical Service and give special attention to the extension of health facilities and medical care plans, indigent

care, infant, maternal and child welfare, lay sponsored voluntary health plans and federal medical services. The Council on Rural Health has carried on a constantly expanding program and, in conjunction with farm and other rural agencies, has made many worthwhile contributions in the direction of improving the health of the people in rural areas.

One of the most useful activities in the A.M.A. in a number of states is the physician placement service. We in our state are particularly proud of this service, operating under the state council on Health and Medical Service. This Council, while not operating under our state society, is given generous support by the state association. In addition, over 400 of our members are individual contributing members of the Council. This placement service has been so successful that at present there are more applications from physicians seeking placement than from communities in need of physicians.

The Washington office of the American Medical Association has become of increasing importance. The number of bills before the Congress concerned with health matters is constantly increasing. The development of accurate and detailed information concerning these proposals and the dissemination of this information to the state and county societies is of first importance. Unless you know what is going on in Washington, how can you think or plan or act. In addition, this office collects and makes available to the members of the Congress pertinent information on medical subjects.

It is of interest to note that of the 1972 county societies, over 1700 of them have less than 100 members. These county societies are the really important ones. Their members as a rule are much closer to the people they serve and they have a greater opportunity to play an influential part in the life of their community.

The county society through its members should take an active part in all agencies concerned with community welfare and particularly those that have a connection with health. It should promote the formation of health councils and interest itself in the public health phase of medicine. It can work with the local health departments in improving and extending public health services in each community. It can stimulate its members to activity in civic clubs, religious organizations and in the educational field. Individual members can support the community fund or chest by contributions of time or money. Through all these activities, the county society can make itself felt in every worthwhile phase of community life.

The county society and its members should also be aware of the needs of their communities from the standpoint of hospitals and other medical facilities. They should try to improve the quality of existing facilities, to extend them when the need exists. It should be the objective of the county society to improve its community in every way, to help promote the total community welfare and make it a more desirable place in which to live.

The county society should constantly endeavor to improve the quality of medical care in its community, to improve the professional status of its members through scientific meetings, journals, clubs, hospital staff meetings, by encouraging qualified younger men to come into an area where they are needed. By these means, the general level of medical practice can be consistently improved. They should keep a kindly but watchful eye on the quality of medical practice in the community. Through suitable committees, it should adjust differences when they arise between physicians and their patients and it should make provision for adequate medical service.

The rapid expansion of voluntary pre-payment insurance against the cost of hospital care and medical and surgical care in hospitals has been one of the striking developments of the last twenty years. At the present time over 90 million people have some type of coverage against hospital costs, 70 million against surgical and 35 million against medical care in hospitals. These figures are still expanding. It is notable that the highest percentage of coverage is in the highly industrialized states and in the great industrial centers. Coverage has lagged in the towns and rural areas. The county society can do a great service by surveying its own area and working out plans to extend to a greater degree the benefits of voluntary pre-payment plans in its own community.

Abuses have developed in the field of pre-payment insurance. The county society can promote community welfare by aiding in the correction of these abuses. If voluntary pre-payment fails to accomplish its full purpose, it will be because such abuses as unnecessary hospitalization, prolongation of hospital stay and over-use of the special hospital services have taken place. The effect of over-use is to increase the total hospital and professional cost for the community. This cost is bound to be reflected in increased insurance rates or depreciation in the quality of hospital care. It will eventually be influential, as a result of higher premium charges, in retarding sales of this type of coverage. Failure of

the pre-payment plan to expand, particularly in the non-industrial areas not now well covered, will result in increased pressure for further extension of the federal government in the field of medical care.

In this day of rapid advances in the science of medicine, full use must be made of modern methods, but other and more important attributes of medicine must not be lost. Medicine to meet the needs of the people and to satisfy their desires must be personal. We speak rather glibly of the physician-patient relations often without considering its meaning. A high proper is to be maintained. It is based on a mutual regard between the physician and the patient, the regard by the physician for a particular individual with a medical problem that harasses him and a regard by the patient for the doctor as a man of skill and sound training, an honest man and a kind and understanding man. The development and maintenance of this type of relationship can only be accomplished by and through the local society. The problems facing us today are many and varied. They are concerned with the science of medicine and the practice of medicine. Doctor-hospital relations, the financing of medical care, medical education, intern and residency training, extension of facilities, and the growth of federal medicine, to mention only a few, are some. The American Medical Association is in a position to make studies, compile facts and give you information on which you can base your judgment. It may formulate policy but it cannot carry it into effect without your support and cooperation. We do not ask that you necessarily support these policies. We do ask that you be active in your local association, that you inform yourself and that you assume the full privileges and duties of an American physician. The one main policy of the American Medical Association is to work for the constant advancement of the art and science of medicine, and, by so doing, bring better health to all of our people. If these policies are sound and well-conceived, they deserve your support. This support cannot be passive. It must be positive and vigorous, if the proper policies of the American Medical Association are to be made effective.

If you believe in these policies, you should support them. If you do not believe in them, you should not indulge in careless and destructive criticism but you should work in an orderly way to change these policies. The strength of the American Medical Association is now and always has been in the local medical societies.

521 Wainwright Building.

Medical Public Relations in the State.

From entries in the Fourth Annual Public Relations Award at the Seventh Annual Virginia Public Relations Conference, held in Richmond, March 3-5, the following was published about The Medical Society of Virginia:

To demonstrate that "A free profession makes possible the best medical care", The Medical Society of Virginia sponsored in 1954 a comprehensive program of public information—Medical forums were held in five Virginia cities, and many drew attendance to "standing room only". The Society developed a public relations course for Medical secretaries, receptionists and office nurses. This course already has been presented in nine cities and attended by over 450 office assistants. In cooperation with Cornell University of Medicine, the State Department of Health and Virginia State Police, the Society is conducting a research project in the Fredericksburg area and in the Staunton-Waynesboro area to find out what structural defects and weaknesses cause death and serious injury in automobile accidents. The effects of this research well may contribute to the entire nation. In addition to cooperation with National radio and TV informative programs, the Society conducts its own annual Public Relations Conference in the expressed belief that public relations begin at home.

Management of Chronic Glomerulonephritis

GUY W. DAUGHERTY, M.D.
Rochester, Minnesota

THE management of chronic glomerulonephritis is a subject of interest and a field in which progress has been made in recent years. This progress has been made slowly, with small steps rather than with spectacular strides. Much of it has come as the understanding of electrolyte metabolism and renal function has slowly increased.

By careful and continuous supervision much can be accomplished for the patient with chronic glomerulonephritis. He may be helped to lead a productive and comfortable life, although the problem is not approached with the idea of cure. He may be tided over periods of sudden worsening of his renal insufficiency caused by acute infections. He may be saved from fatal potassium intoxication secondary to injury or operation with its disturbance in water balance. Finally, he may be made more comfortable by measures designed to control acidosis, nausea, dehydration and other symptoms seen in the later stages of chronic glomerulonephritis.

Chronic Glomerulonephritis and Other Causes of Renal Failure

In this discussion of chronic glomerulonephritis one definite limitation and one broadening of the scope of the discussion will be made: the limitation refers to exclusion of a discussion of the nephrotic syndrome, the broadening to the concept that the general principles in management are similar whether renal insufficiency is due to glomerulonephritis or some other disorder. Some of the disorders that may give rise to problems similar to those in chronic glomerulonephritis are listed in Table 1.

While the clinical pictures may be somewhat similar in the later stages of these various disorders, it still is important to define the nature of the disease accurately for purposes of prognosis, if for no other reason. For instance, the patient with polycystic disease or chronic pyelonephritis usually has a definitely better prognosis than the one with equally severe renal failure due to malignant nephrosclerosis or diabetic nephropathy, that is, Kimmelstiel-Wilson syndrome.

Table 1
Causes of Chronic Renal Insufficiency

1. Primarily renal
   - Chronic glomerulonephritis
   - Chronic pyelonephritis
   - Polycystic disease of kidney
   - Primary tubular dysfunction
2. In associated diseases
   - Hypertensive vasculorenal disease
   - Obstruction of lower part of urinary tract
   - Diabetic nephropathy
   - Renal amyloidosis
   - Multiple myeloma
   - Lupus erythematosus
   - Lymphoblastoma
   - Vitamin D intoxication
   - Milk-alkali syndrome
   - Sarcoidosis
   - Hyperparathyroidism
   - Periarteritis nodosa

Pathologic Physiology

Glomerular, Vascular and Tubular Damage.—In glomerulonephritis the primary lesion is in the glomerulus. It is a proliferative lesion involving Bowman's capsule and the basement membrane of the capillaries. As time goes on, scarring may occur with obliteration of the entire glomerulus. Also in the advanced stages, with the development of hypertension, the sclerotic vascular changes may be extensive enough to interfere with blood flow so that the nephron functions poorly and ultimately becomes functionless. With the glomerular and vascular lesions, tubular damage or destruction occurs secondarily.

Nature of Dysfunction.—When glomerular dysfunction is extensive enough the glomerular filtration rate, and hence the amount of water and solute filtered, is decreased. As this decrease becomes more marked, there is retention of nitrogenous waste products and certain other substances such as sulfate and phosphate.

When the damage to the tubules is of sufficient

GUY W. DAUGHERTY, M.D., *Section of Medicine, Mayo Clinic and Mayo Foundation.*

The Mayo Foundation, Rochester, Minnesota, is a part of the Graduate School of the University of Minnesota.

Read at the meeting of the Seaboard Medical Association of Virginia and North Carolina, Wilson, North Carolina, November 14 to 16, 1954.
Received for publication, December 10, 1954.

magnitude, the secretory function of the tubular cell is lost, as is the normal ability of the tubule to conserve base and regulate the acid-base balance. The tubular cell, to conserve base, reabsorbs bicarbonate and substitutes hydrogen ions or ammonium ions for the cations of the filtrate. Acidosis occurs when the tubular cells lose the ability to manufacture ammonium ion or to effect the substitution of hydrogen ions for the cations of the filtrate.

Another tubular disturbance that may occur is inability to regulate water balance adequately. Polyuria may commonly be seen in the earliest stages of renal insufficiency, and this is considered to be a compensating mechanism. On the other hand, and usually later, edema may result—edema that is not due to the nephrotic syndrome or congestive heart failure but to renal retention of water by mechanisms that are not entirely clear.

As regards specific ions, usually calcium is lost in excess of intake and the value for serum calcium is generally reduced. Values for serum potassium are usually normal until late in the course of renal insufficiency, when retention of this ion occurs along with decrease in the volume of urine. This complication may be very serious and may even be the immediate cause of death. Hyperkaliemia may be indicated by alterations in the electrocardiogram. Curiously, the opposite condition as regards potassium also may exist—there actually may be renal wastage of potassium over and above that excreted because of acidosis; this is being recognized in an increasing number of patients by various observers and may occur in relatively mild renal insufficiency. More widely known, but also rare, are the "sodium wasters," whose condition is sometimes designated "salt-losing nephritis"; this condition is due to a tubular defect in reabsorption of sodium from the filtrate.

Tests of Renal Function

Glomerular filtration is reflected in the value for blood urea and the urea clearance. The value for plasma creatinine is likewise an indication of glomerular filtration and has the advantage of being less affected by ingestion of protein and by dehydration.

The cells of the distal portion of the tubule must reabsorb water against an ever-increasing osmotic gradient. The results of the urine-concentration test give an indication of the reabsorptive capacity of the tubular cells. The ability of the kidney to excrete phenolsulfonephthalein is affected by the excretory capacity of the tubules and the effective renal blood flow.

Tests used clinically to give information about acid-base balance and electrolyte structure are determinations of plasma chloride, carbon dioxide combining power, serum sodium, serum phosphate and serum sulfate.

Management

Prevention.—The mechanism by which glomerulonephritis develops is still not understood. It is thought that infection by a group A streptococcus is usually responsible for initiating the process, but certainly in many instances such infection, if it occurs, goes unnoticed. The variability of the incidence of acute glomerulonephritis and the lack of relationship to acute rheumatic fever, another disease thought to follow streptococcal invasion, have constituted an unanswered problem. Recently, interesting studies by Rammelkamp and others have suggested that certain strains of group A hemolytic streptococci tend to be nephritogenic. He found that in a large percentage of cases acute glomerulonephritis was associated with infection with a type 12, group A streptococcus. It has been suggested that the periodic appearance of type 12 streptococci would explain the variable incidence of the disease. If this is true, it would seem that the incidence of glomerulonephritis might be reduced by the prophylactic treatment of the family and close associates of the patient who has acute glomerulonephritis.

Infections.—Patients with chronic glomerulonephritis tolerate infections poorly. An infection frequently causes increased catabolism of protein, which increases the degree of renal insufficiency. Prompt treatment with proper antibiotics is, of course, extremely important. Certain patients with glomerulonephritis who have recurrent streptococcal infections should be given long-term prophylactic penicillin therapy similar to prophylactic antibiotic therapy employed for patients with rheumatic fever.

Diet.—For the patient with "latent" glomerulonephritis without renal insufficiency or edema my colleagues and I usually advise a general diet that contains 60 to 70 gm. of protein and is not restricted as to sodium content. In the presence of azotemia we restrict the intake of protein to 30 or 40 gm. a day, provide for an adequate caloric intake of carbohydrate and fat and encourage a large intake of fluid. When the patient is disinclined to eat, in severe azotemia associated with anorexia and nausea, special attention should be directed toward maintaining the intake of carbohydrate to prevent the breakdown of body protein. The use of commercial fat-carbohydrate emulsions or intravenous dextrose solu-

tions is helpful.

Electrolytes.—The commonly seen electrolyte disturbance is acidosis due to failure of the base-conserving function of the tubules. Mild to moderate decrease of the plasma carbon dioxide is usually seen. It is when the acidosis becomes severe enough to cause symptoms that treatment with sodium bicarbonate or sodium lactate is indicated. The amount necessary is difficult to predict but my colleagues and I usually start with 75 to 100 mEq. of sodium and then are guided by the patient's response. The concurrent administration of calcium is advisable if there is any suggestion of tetany.

The most frequent abnormality in potassium concentration is retention or hyperkaliemia. Except as it occurs terminally in chronic glomerulonephritis, it is most often seen when there is an episode of acute renal failure superimposed on chronic renal insufficiency. Such an episode may follow a severe gastrointestinal upset with vomiting, or hypotension that may be associated with an injury. Therapy consists of restricting the intake of potassium-containing foods, and especially the intake of protein. The intravenous administration of a sodium chloride solution has a very transient effect in combating hyperkaliemia. The intravenous administration of a dextrose solution also is temporarily beneficial. The removal of potassium by the administration of cation exchange resins by mouth or as an enema is practical and effective. In certain cases dialysis is indicated.

A rare electrolyte disturbance caused by renal tubular dysfunction is that of hypokaliemia or potassium wastage, as previously mentioned. Also in chronic glomerulonephritis one may see another electrolyte disturbance in the form of hyponatremia, which occurs in the sodium waster. The treatment of hypokaliemia and hyponatremia is of course the administration of potassium or sodium salts respectively.

Hypertension and Congestive Heart Failure.—Most patients with chronic glomerulonephritis have hypertension, and in some the terminal picture is predominantly that of congestive heart failure due to hypertension. In most cases it appears that the hypertension is necessary to maintain glomerular filtration, because reduction of the blood pressure is associated with worsening of the renal insufficiency. Certain patients, however, do well when the blood pressure is lowered. Then there is the group with mild renal insufficiency and congestive heart failure secondary to hypertension who represent the most favorable of these patients for treatment of hypertension. Careful observation of renal function is important during treatment.

Restriction of sodium intake, administration of digitalis, provision for adequate rest and other routine measures are of course indicated.

Anemia.—In the anemia of chronic nephritis, iron, liver and vitamin B_{12} are of essentially no value. Cobalt has proved helpful in the hands of some observers but is apparently poorly tolerated by the gastrointestinal tract. My colleagues and I use repeated small quantities of blood (250 to 300 cc.) given slowly by transfusion.

"Uremic" Symptoms.—By the term "uremia" we would indicate not merely an increased concentration of urea and creatinine in the blood but the symptom complex of fatigue, weakness, vomiting, headache, hiccough, pruritus, muscular twitchings and convulsions or coma. This symptom complex is mainly of central-nervous-system origin. Fatigue and weakness are often lessened by transfusion of blood. Nausea and vomiting may respond to treatment with Dramamine (dimenhydrinate), Bonamine (meclizine) or Thorazine (chlorpromazine). For headache, elevation of the head of the bed is sometimes helpful. Also helpful at times is the use of drugs to lower the blood pressure. Lumbar puncture with removal of a small amount of spinal fluid may relieve headache and sometimes convulsions. Sedatives are indicated for apprehension. Intravenous administration of barbiturates may be required for convulsions. Finally, the physician must remember that he has a tremendous responsibility in maintaining the patient's morale.

The Significance of Hematuria

AUSTIN I. DODSON, M.D.
AUSTIN I. DODSON, JR., M.D.
Richmond, Virginia

THE presence of blood in the urine may be evidence of serious disease of the urinary tract. MacKenzie found that 20.24% of patients admitted to the Urological Service in the Royal Victoria Hospital had blood in the urine and that 75% of these patients were suffering from either tumor, infection, calculus or nephritis. Failure to properly appreciate the potentially serious nature of this symptom causes much loss of time before a proper diagnosis is established, and in many instances permits the pathological lesion to develop beyond the possibilities of cure. Kretschmer, in a review of 933 cases of hematuria, found that the average time that elapsed between the initial appearance of blood in the urine and the time of diagnosis was 2.39 years. Higgins, in his study of the records of 1,600 patients, found this figure to be 2.59 years.

It has been estimated that the normal individual excretes up to one-half million red blood cells in the urine in 12 hours. This small number cannot be detected by ordinary analysis. An occasional red cell in the urine is usually of no clinical significance and it is well recognized that blood cells may be seen in the urine following vigorous exercise or exposure to cold. Such appearance of blood cells in the urine is, of course, transitory.

Bleeding, as a result of pathological lesions of the urinary tract, may be gross or microscopic, continuous or intermittent in character. Because of this latter characteristic, patients are prone to postpone consulting their physician, or to credit internal medication with the cessation of bleeding, with the result that a diagnosis is unnecessarily delayed. The presence of blood in the urine is never an indication for internal medication until the proper diagnosis has been made. Too frequently, hematuria is treated as a disease rather than a symptom, with the result that potentially curable neoplasms can become incurable during the elapsed time between the initial appearance of blood and the eventual diagnosis. Even the presence of microscopic blood in the urine may indicate serious urinary tract pathology, and, unless of a very transient nature, indicate the need for a careful search for the cause. The symptoms leading to the diagnosis of carcinoma of the ureter in one of our patients were a few red blood cells in a centrifuge specimen, noted during routine examination. After red cells were found in the third examination, taken at weekly intervals, a cystoscopic examination was done and a tumor in the lower third of the left ureter was demonstrated and removed, with complete cure. There is little doubt that sooner or later the growth would have caused obstructive symptoms, but in all probability by that time metastasis or extension into surrounding tissues would have occurred.

Bleeding is the first symptom of at least 3/4 of the malignant tumors of the urinary tract. As a rule, unless associated with an inflammatory lesion or unless clots obstruct the ureter or bladder, there is no pain or other discomfort. Fortunately in many instances, there are associated symptoms which suggest the source of the bleeding.

The causes of hematuria may be divided into three major groups, namely: (1) Systemic causes, (2) Extraurinary pathology, and (3) Lesions of the genito-urinary system. Approximately 75% of patients with hematuria fall in the latter group.

Among the systemic causes of hematuria are hemophilia, polycythemia vera, purpura hemorrhagica and leukemia. Sickle cell disease as a cause of unilateral renal bleeding has been reported in thirty-two cases, and is felt to be a common cause of unexplained urinary tract bleeding among Negroes. Acute febrile illnesses as scarlet fever, rheumatic fever, tonsillitis and measles have been associated with hematuria. Likewise, it has been reported in adults and children with scurvy. The administration of such drugs as the sulfonamides, cantharides, mandelic acid, and salicylate can cause hematuria. Prolonged contact with carbon tetrachloride has also been reported as a cause of hematuria. Heparin or dicumarol, when given to prevent venous thrombosis, will frequently be the cause of gross or microscopic bleeding, which will promptly cease with return of the blood clotting time toward normal levels. We have recently observed two consecutive cases of this type of bleeding. Hodgkin's disease, arteriosclerosis with renal involvement, and periarteritis nodosa are occasionally the cause of hematuria.

Presented at the First Interstate Scientific Assembly of the Medical Society of the District of Columbia and The Medical Society of Virginia, Washington, D. C., November 1-3, 1954.

Extraurinary pathology with resultant irritation of adjacent genito-urinary structures may cause gross or microscopic hematuria. Chief among these are acute appendicitis, diverticulitis of the colon, rectal, colon or pelvic neoplasms and acute or chronic pelvic inflammation.

Lesions of the genito-urinary system causing hematuria include practically every urologic disease involving structures from the prepuce to the renal glomeruli and tubules. Renal lesions include nephritis, acute and chronic pyogenic infections of the kidney parenchyma or pelvis, tuberculosis, polycystic disease, nephroptosis, renal calculi or crystals, hydronephrosis, benign and malignant neoplasms, renal papillitis, renal anomalies, and trauma. Ureteral lesions causing hematuria include neoplasms, strictures, calculi and inflammation.

Gross bleeding is the presenting symptom in approximately 85% of patients with bladder neoplasms, while other vesical causes include calculi, acute or chronic inflammation, tuberculosis, trauma and specific or non-specific ulcers.

Benign prostatic hypertrophy with its increased vasularity frequently causes bleeding. This symptom is rarely associated with prostatic carcinoma, except in the late stage of the disease.

Urethral neoplasms, strictures, inflammatory disease and trauma usually cause blood in the urine. Campbell states that the most common cause of urinary tract bleeding in male children is meatal stenosis with ulceration.

Doss, in a review of 5,965 cases of hematuria, found that, in order of frequency, inflammatory lesions, neoplasms, foreign bodies, tuberculosis, and trauma were the most common causes of bleeding. Higgins found infection, tumor, calculi and nephritis to be the most frequent etiologic factors in a series of 1,600 cases of hematuria; and Von Duzen found that 63.8% of 500 consecutive cases of hematuria required treatment other than medical.

The accurate diagnosis of the cause of urinary tract bleeding depends on a careful medical history, thorough and complete physical examination, accurate laboratory studies and usually a complete urologic investigation including cystoscopy and ureteropyelograms. The history will frequently give a clue as to the possible cause of hematuria. The presence and character of pain, a history of weight loss, of fatigue or of frequent or difficult urination often suggest the probable cause of bleeding. Recently we were interested in the history of a Negro child who was brought into the hospital because of bleeding. The child's mother, after careful questioning, remembered that the day before he had fallen from a swing. She paid little attention to the incident. The child had a ruptured kidney.

The character of the bleeding is very important. Dark or smoky urine generally indicates the kidney as the source of the bleeding, while bright red urine is most frequently associated with disease of the lower urinary tract. Likewise, initial hematuria usually indicates urethral disease; terminal bleeding may indicate urethral or bladder pathology, and when all of the urine contains blood we must suspect the kidneys, ureters or bladder as the source. Profuse bleeding is more apt to result from trauma or tumors of the kidney or bladder. Bleeding from calculi is rarely profuse, frequently microscopic, and usually accompanied or preceded by pain. Bleeding from renal tuberculosis is rarely profuse. It is usually sufficient to give the urine a smoky appearance; irritability of the bladder is a usual accompanying symptom. Bleeding from nephritis varies from microscopic amount to sufficient to turn the urine quick dark. Casts can frequently be found and there is usually more albumen than the amount of blood present would account for.

Physical examination may reveal such abnormalities as hypertension, petechiae, abdominal or pelvic masses and abnormalities of the scrotal contents. Thorough rectal and vaginal examinations should be done on all patients in the search for possible causes of hematuria.

Complete hematological studies must be done, including a complete blood count and blood chemistry determinations. The possibility of Sickle cell disease must be always kept in mind when investigating Negro patients, and Sickle cell preparations should be studied. A careful urinalysis is absolutely necessary inasmuch as the presence of albumen, casts, crystals, etc., may shed some light on the possible diagnosis. Renal function studies are frequently helpful.

The most important diagnostic procedure at our disposal is a complete cystoscopic examination, including retrograde ureteropyelograms. Intravenous pyelograms will frequently reveal renal or ureteral cause for hematuria, but in general are not as satisfactory as the retrograde type. At least 75-80% of the cases of hematuria can be diagnosed by the combination of cystoscopy with retrograde pyelograms. Of particular importance is the advantage of examining the patient while the bleeding is in progress. If the examination is postponed until the gross bleeding

ceases, we are frequently only able to prove or attempt to prove the normality of the urinary tract or to exclude the presence of malignant disease.

Occasionally careful and repeated search fails to determine the cause of gross renal bleeding. Such cases are designated as essential hematuria. Pathological findings in kidneys removed have been insigificant. Dilated blood vessels at the tips of the renal papillae and submucosal hemorrhage are usually reported. Earl A. Nation, *et al.*, found submucosal hemorrhage with lymphocytic and eosinophilic infiltration, bleeding into glomerular spaces and tubules. They suggest the probability of allergy as a cause. Many of these patients are not inconvenienced by the bleeding and frequently the bleeding stops without apparent cause. Cessation of bleeding has been reported following extraction of infected teeth and repeated small blood transfusions have been used with success. Occasionally irrigation of the renal pelvis with a solution of silver nitrate is helpful. Nephrectomy should not be done unless the patient is losing more blood than is consistent with reasonable health. Bleeding may occur in the opposite kidney. Of 71 white patients reported by Cahill, careful recheck established a definite diagnosis in 48. Included were three cases of tuberculosis and three of tumor. It is therefore important to re-examine these patients at intervals until every possibility of serious pathology is excluded.

In conclusion, blood in the urine, even in microscopic amounts, may be caused by serious disease of the urinary tract. Treatment should not be instituted until every necessary diagnostic effort has been made to determine its cause. Drugs, even if temporarily effective in controlling the bleeding, rarely effect the pathological process.

Bibliography

Finkle, A. L., Prince, C. L., and Scardino, P. L.: Gross Renal Bleeding, Journal of Urology, 72: Pages 111-116, August, 1954.

Cahill, G. F.: Hematuria—Its Clinical Significance, Journal of Urology, 47: Pages 224-234, March, 1942.

Taylor, J. A.: Hematuria of Renal Origin, Journal of Urology, 63: Pages 997-1005, June, 1950.

Goodwin, W. E., Alston, E. T., and Semans, J. H.: Hematuria and Sickle Cell Disease, Journal of Urology, 63: Pages 79-96, January, 1950.

MacMahon, H. E., and Lalorraco, Racci: Essential Renal Hematuria, Journal of Urology, 71: No. 6, Pages 667-677, June, 1954.

409 Medical Arts Building.

"New" Theory Not So New.

The supposedly modern notion that many skin diseases result from psychological difficulties is not so new after all. The writers of the Bible knew about it some two thousand years ago. The story of Job, whether believed to be religious drama or an historical document, is typical of the mysterious cases seen by the modern physician, according to Dr. William P. Guy, writing in the March Archives of Dermatology, published by the American Medical Association.

Dr. Guy said Job's disease and recovery are as baffling as the psychosomatic cases of the modern dermatologist's office. Job was "a pious man and very prosperous." He had a large family, immense herds of livestock, and was as good as he was great.

Permission to test Job's religion was given to Satan by God, and Job was stricken by a terrible skin disease. After losing his property, his family, and fleeing the city, he finally cursed the day he was born and begged God to explain to him why he was afflicted. In answer to this wish God spoke "out of a whirlwind." He told Job to look around and observe the wonder and mystery of the world, and realize the omnipotence of the Almighty. Job was satisfied, and repented. Miraculously, his health was restored and his prosperity doubled. He died "old and full of days."

The reasons for Job's physical sufferings were never explained. Neither was his cure—but perhaps his spiritual experience had a soothing effect which healed him.

"Regardless, this profound and sophisticated work of religious literature should serve as a reminder to all physicians of psychosomatic bent that their thoughts have been pondered before, and long, long ago."

The Medical Care of Acute Poliomyelitis

R. CANNON ELEY, M.D.
Boston, Massachusetts

WE ALL recognize the bitter truth that there are no "cure alls" for the patient with acute polio—there are as yet no magic drugs. Yet, at the same time, we do appreciate the fact that time, trial, and error have shown that certain procedures are not only useless but may actually be detrimental and even harmful to the patient, while other measures have the opposite effect. Therefore, it might prove salutory to consider our present position in the medical care of these patients during the acute phase of their illness.

I am sure that many of us recall the days when the patient with acute polio was the responsibility of the internist or pediatrician alone and was only referred to the orthopedist after this phase of the disease, i.e., after the acute febrile period had subsided and at a time when his contractures and deformities had already developed or had begun to develop. This type of care should be obsolete and should never be allowed to exist if we as physicians are really concerned with the best care for our patients. The management of polio patients today requires not a single physician but a closely knit, well-trained team comprised of pediatricians, orthopedists, otolaryngologists, anesthetists, physiotherapists, and social service workers. It is only by such "combined operations" type of care that the best results can be obtained for the patient. This type of management can be established in any hospital, large or small, where the members of the staff are willing to put aside petty jealousies and organize such a "team" whose responsibility will be the supervision and direction of the care of all cases of acute poliomyelitis, whether they be so-called "private" or "ward" patients. Under such a plan the individual receives the benefit of all hospital services from the moment he is admitted. Experience has clearly shown the value of this method of care. In many instances prolonged and costly periods of hospitalization for rehabilitation can be avoided, and this also applies to their post-hospital "follow up" period. I have been an active participant in this type of "combined operations" treatment for many years and am convinced of its value to the patient, his family and to everyone concerned in his "overall" care. Other points illustrating its efficiency and its effectiveness will become apparent as we continue this discussion.

Earlier I mentioned that certain procedures might be harmful to the patient, and by this I meant to imply that they might be conducive to an unfavorable course of the disease, i.e., the development of paralysis. The observations of Russell[1] and Horstman[2] have clearly shown that physical activity of any type immediately after the onset of meningeal symptoms enhances paralysis in the spinal type of the disease and, from their observations, it would also appear that, the more strenuous the activity, the higher the incidence of paralysis. Thus physical fatigue becomes an important factor and one would do well to remember that repeated and often needless physical examinations during this phase may have an untoward effect. Therefore, *bed and rest* are of prime importance. There is a strong tendency to transport patients during the early phase of poliomyelitis, and often over long distances, to a hospital that will admit them, (not all hospitals will), thereby exhausting the individual. At times such a measure may be necessary but, when possible and *practicable,* this should be avoided, for here, again, an untoward influence in the course of the illness may be introduced. There are also those incidences or factors which occur several days or weeks before the onset of the disease that are considered to exert an unfavorable influence on the course of the infection such as the injection of antigens, tonsillectomy and/or adenoidectomy, dental surgery, plastic oral procedures and local trauma. Since it is impossible to predict which individual in a community will contract poliomyelitis, it is advisable to avoid these procedures when the disease is endemic, or even prevalent locally.

The physician who assumes the responsibility for the medical care of the patient with acute polio should be thoroughly familiar not only with the natural course of the disease and its complications as they pertain to his physical status, but also as they may pertain to his emotional reaction to his illness. In

Presented at the Fifty-Ninth Annual Meeting of the Seaboard Medical Association of Virginia and North Carolina at Wilson, North Carolina, Nov. 14-15-16, 1954.
From the Dept. of Pediatrics, Harvard Medical School, and the Dept. of Medicine, Children's Medical Center, Boston, Massachusetts.
Received for publication, December 18, 1954.

the very young the psychological aspect does not play a too important role, but in the older child and particularly the adolescent and young married groups it assumes a most important position—a position which I am afraid is only too often neglected or completely overlooked. This psychological care should not be confined to the patient alone but should include his immediate family, for they are the ones who are going to be affected by the course of his illness and its final outcome—this is particularly true when it concerns a married individual. The older individual is well aware of the disabling complications of the disease and naturally is quite alarmed and anxious once he becomes aware of the nature of his illness. It is at this point, i.e., early in the course of the disease, that much of the psychological impact to the patient and his family can be relieved by a frank and honest discussion of the situation with them by their attending physician. This discussion should include a description of the usual course of the disease, including the period when complications may or may not arise, the incidence of paralysis and the possibility of other cases occurring within the family. Once the patient and the family know what to expect, a feeling of calmness displaces the feeling of fear and apprehension. Then, too, there is the financial aspect which is of real concern to most young adults, and this alone causes a worry that can be relieved the very day of hospital admission by a talk with the social service worker who quietly and calmly assures the family that the patient will receive the benefits of all the services of the hospital regardless of their income, and that the National Foundation of Infantile Paralysis is standing by to help them if their services are needed. These talks should take place in the presence of the responsible members of the family so that a better understanding and relationship is established. I am afraid that only too often we ignore or forget the immediate family while attending the sick member. Remember that the family is sick at heart if not in body, and much can be and should be done to help them. Probably the most common cause of anxiety and apprehension on the part of the patient is loose and unguarded remarks or conversation made by the hospital house staff, its nurses and its physicians. I know of no better example of this than the nervous, frightened patient having mild respiratory difficulty who is thrown into a state of panic by overhearing a discussion just outside of his door as to whether he will need the "iron lung" before the day is over. You can hardly expect this patient to be calm and composed or to be able to cooperate or coordinate with the respirator if and when it is rolled into his room. Yet it happens only too frequently.

From this point we can proceed to the actual medical care of the patient. Of primary importance is complete bed rest and with this anatomical and physiologic alignment of the body. It is here that "team work" ("combined operations") plays such an important part, for intelligent orthopedic supervision can prevent the development of unnecessary contractures and at the same time preclude the necessity of prolonged hospitalization, physiotherapy and expense.

Nursing Care: I place this first on the list, for I fully believe that it is its rightful place. Such care should be extraordinarily good and when possible by nurses well experienced with the disease and a keen appreciation of the speed with which a seemingly well patient may become critically ill. Nursing occupies a paramount position in the care of patients with acute poliomyelitis.

Moist heat in the form of hot packs for the relief of pain and muscle spasm. Prone or lay-on packs or wrap-around packs for legs, arms, axilla, and groin may be employed as often as necessary for comfort.

Passive motion of all joints should be employed as soon as feasable and as near to the normal range as pain permits; never grasp the tender and sensitive muscles, but lift the extremity at the joint. Follow this with hot packs for the maximum comfort and benefit to the patient.

The next point of importance is the problem of *secondary infection* with its resulting complications. Since inability to void is fairly common (and often one of the earliest manifestations of the disease), catherization may become necessary early in the course of the disease. However, before this is employed, it is advisable to give the patient 2-5 mgm. of "Furmethide" subcutaneously as this frequently causes a prompt emptying of the bladder. Usually there are no side effects from the use of this drug, although care should be exercised when it is given to an individual with a history of allergy. Catherization is an invitation to infection and, therefore, appropriate antibiotics and chemotherapeutic agents, preferably those that are not irritating to the kidney, are indicated. This is particularly true when it becomes necessary to employ an in-dwelling catheter and, in such incidence as this, tidal drainage should be established. Equally important are the possible pulmonary disturbances which may result from res-

piratory infection, from emboli from an area of phlebitis, or the aspiration of pharyngeal or gastric secretions. Here, again, one should institute prophylactic measures. Such management is essential in both the spinal as well as the bulbar types of the disease. Unfortunately some forms of the later type are often of such short duration that any measure of therapy is of little or no avail.

Now consider the criteria upon which the initial diagnosis is made. Granting that the physical signs are suggestive of polio, is an examination of the cerebro-spinal fluid always necessary? In the paralytic phase of the acute disease this may not be necessary but during the acute non-paralytic period it is of real importance in excluding those diseases that may so closely similate acute polimyelitis, i.e., meningoencephalitis, early bacterial meningitis, mononucleosis, allergic responses, tuberculosis meningitis, etc. In evaluating the examination of this fluid, it is well to remember that in 15-20% of the cases the initial examination may be within normal limits and that subsequent examinations may only reveal an increase in the protein content. Yet this increase plus the clinical course of the infection may prove sufficient to establish the diagnosis.

There are some who feel that a lumbar puncture has an untoward effect upon the patient. When performed under present day techniques, little if any unpleasant disturbances should follow. The question has also arisen as to whether or not such a procedure is of therapeutic value, such as relieving headache, edema, etc. Twenty-five to thirty years ago we were of that opinion, but as of today there are very few who would accept it as such a measure.

Then there was the golden era of convalescent serum, which subsequently proved to be a fiasco. Nor does gamma globulin occupy a position of therapeutic significance during the acute phase of the disease. It is indeed most unfortunate that single case reports of the use of these substances find their way into medical literature and the press, as they only rekindle false hopes among those who need to know the truth.

A question that really is important concerns hydration and dehydration. Post-mortem examinations have shown that the brain of an individual dying from acute poliomyelitis weighs more than the normal brain and on this basis some physicians have concluded that hydration must play an important role in the fatal course of the disease. As a result, dehydration has become their theme. In view of such divergent opinions, it would appear that the medium is a urine with a specific gravity of 1020-1030 which meets the requirements of both groups. The intravenous administration of hypertonic glucose as well as the intramuscular and even the intra-spinal administration of adrenalin have in the past been employed as a means to deplete cerebral edema. There is no evidence that clinical improvement followed their use.

Literally, the pharmacopeia has been thrown at these patients, and numerous and sundry claims have been made. Actually there are few drugs needed or even indicated in the care of these patients. However, those that are currently advocated should be considered:

Curare: This and similar drugs which interrupt the nerve impulses at the myoneural junction are not without real dangers, yet they are considered by some to be useful and particularly in individuals who are struggling against a respirator. This type of medication is considered by some to be of value in establishing early muscular relaxation and hence permitting earlier rehabilitation. Such a measure has never been considered as necessary in our management of these patients.

Prostagmine: Useful as an antidote when Curare is employed in too large dosage. Perhaps its most useful purpose is to stimulate peristalsis in abdominal distention or just prior to the administration of an enema.

Procaine Hydrochloride: Helpful in the hands of a few to bring about relaxation and relief of muscular spasm. Not for general use and not essential.

Priscoline: A sympatheticolytic drug considered by some to be of value in producing muscle relaxation and increased blood supply to the involved muscles. Its use in treatment depends largely on its supporters—and they are few.

Etamon: A drug that irreversibly blocks transmission of impulses at the ganglia of the autonomic nervous system. This agent has found more support in England and South Africa than in the United States. If of value, it is probably more helpful in patients with hyper-stimulation of the sympathetic system. Its therapeutic value has not been proven.

Pyromen: A bacterial derivation thought to inhibit the formation of glial acars in the central nervous system and to produce early relaxation of muscle spasm and pain in polio. The latter observation has not been confirmed.

Quinine: Can be successfully used for relief of muscle cramps and twitchings in dosage that does not produce tinnitus and or impairment of hearing.

Salicylates: Excellent for relief of pain, discom-

fort, and as a mild sedative—especially when combined with small doses of codeine.

ACTH: Shortens incubation period, increases the severity of the symptoms, converts mild paralytic to severe paralytic states and increases mortality rate.

Oxygen: The necessity of administering oxygen during the acute phase of poliomyelitis may arise from a variety of disturbances. Any condition resulting in mechanical obstruction of the airway (pooled secretions, aspiration of vomitus, paralysis of the tongue, paralysis of the abductor muscles of the vocal cords, etc., or disturbances in respiratory function with involvement of the respiratory center, paralysis of the intercostal muscles and/or the diaphragm) or such conditions as pulmonary infection, atelectasis or edema with resulting hypoxia may necessitate its use. Often oxygen is of value as a diagnostic procedure in differentiating between the symptoms of early encephalitic involvement and hypoxia (restlessness, anxiety, apprehension and inability to sleep) as the same clinical picture may occur in both states. When oxygen is employed, it is well to remember to use it in a warm moist form (bubbled through water) as dry oxygen is irritating and causes an increase in tracheal secretions, and so further complicates the situation.

Sedation in acute poliomyelitis and particularly during that period when the clinical course of the disease is so unpredictable has always frightened me. Truly these patients are uncomfortable and even miserable with their muscular pain but most of this can be relieved by hot packs and salicylates and therefore sedation is not required. My anxiety concerning sedation lies in the fact that a patient under such influence may be so dulled that he does not realize that disturbances in his respiration are developing and hence does not make this known to those in attendance. This lack of awareness on the part of the patient of impending danger which might prove fatal could not occur unless sedation has been employed. The danger is a real one and should be carefully considered whenever the question of such therapy arises.

Complications involving the respiratory tract resulting from secondary infection, atelectasis, and aspiration, as well as bladder dysfunction and its possible infection have already been considered. Bleeding from the gastro-intestinal tract[3-4] resulting from ulceration may be a serious complication. This is a disturbance that I do not believe has received sufficient attention in the past, yet it is an important one and should be watched for in all cases of bulbar polio with involvement of the hypothalamus. Daily examination of the stools for gross or occult blood as well as repeated hemoglobin determinations should be made. Symptoms of bleeding may vary from those of nausea, anorexia, and a sensation of gastric distress to frank and gross hemorrhage with vomiting of fresh blood or the passage of old blood or even fresh blood in the stools. Treatment is symptomatic both as it applies to the ulceration and to the loss of blood.

Poliomyelitis, like other diseases that immobilize the patient, has as one of its sequelae demineralization of the bones. This complication may be modified and certainly influenced by a diet containing no milk, by a low vitamine D intake, by frequently changing the position of the patient and by passive as well as active exercises. As a result of hypercalcemia, renal calculi are not uncommon and, aside from adding to the patients distress, may produce severe renal damage, thereby influencing the ultimate course of recovery. If one adds to this renal disturbance secondary infection acquired by repeated catheterization, a critical situation may be quickly established. Much of this can be avoided by careful medical supervision as it pertains to diet, patient's position, fluid intake, urine concentration and the judicious use of antibiotics or chemotherapeutic agents. A Sulkowitz test of the urine performed 2-3 times a week gives a good guide as to the degree of demineralization that may be developing.

Myocarditis as detected by the electrocardiogram or by the clinical course of the patient is not as uncommon as one might believe. Myocardial changes were first reported by Robertson and Chesley[5] as far back as 1910 and many reports supporting this observation have followed. Weinstein and Shelotov[6] in a study of two groups of patients in 1947 and 1949 observed electrocardiographic changes in from 12 to 25 per cent of their patients. These alterations varied from minor T-wave changes to those actually suggestive of myocardial infarction. Age seemed to play a part as the older patients, i.e., 16 years and above, were more likely to develop this complication. Naturally the development of myocarditis as evidenced by the electrocardiogram or by the clinical course of the patient has a decided influence upon the management and care of the patient.

Disturbances in respiration are not uncommon in acute polio and may result from paralysis of the tongue, paralysis of the pharynx with resulting pooling of secretions, paralysis of the abductor muscles of the vocal cords, paralysis of the intercostal muscles and/or the diaphragm, or involvement of the respiratory center (bulbar polio). In the incidences in

which there is paralysis of the tongue, placing the patient on his chest with his head a bit below that level will usually displace the tongue to a forward position and hence give an open airway; when there is pharyngeal paralysis, postural drainage at an angle of 20 to 30 degrees plus intelligent suctioning is often sufficient to relieve the respiratory embarrassment. Rarely is tracheotomy indicated under these conditions. Fluid and electrolyte requirements can be met by subcutaneous or intravenous administration. Gavage feeding should be avoided as regurgitation and aspiration are real hazards.

When respiratory embarrassment occurs as a result of paralysis of the (1) intercostal and/or diaphragmatic muscles, or from (2) involvement of the respiratory center, the physician is faced with an entirely different clinical situation. First and most important is the differentiation of these two types of respiratory disturbance, as this will determine the treatment to be employed. The two conditions can quickly be differentiated by clinical observation and physical examination.

Intercostal paralysis can be noted by splinting the abdomen with the hands and observing whether there is any motion of the chest carriage on inspiration. Diaphragmatic paralysis is indicated by failure of the patient to be able to sniff and also by splinting the chest with the hands and observing whether or not the abdomen protrudes, i.e., expands on inspiration. The irregularity of respiration in rate, depth, and rhythm, and the absence of the above physical findings are usually indicative of involvement of the respiratory center rather than high spinal cord involvement which results in diaphragmatic and/or intercostal paralysis. If there is any doubt as to the type of paralysis, fluoroscopic examination is of diagnostic value. When there is paralysis of the intercostal muscles or of the diaphragm, artificial respiration is indicated and experience has shown that the so-called "iron lung" is the most efficient of the measures that are presently available. The important question that arises under these conditions is when should the patient be placed in the respirator?

Unfortunately many physicians wait until there is severe respiratory distress, as indicated by cyanosis, gasping respirations, hypoxia, etc. It is my belief that respiratory aid should be instituted as soon as respiratory embarrassment appears for muscular fatigue may be conducive to more extensive paralysis. There are several signs and symptoms suggesting that respiratory aid is indicated. For example, the type of breathing, i.e., is it rapid and shallow, are the accessory muscles involved with dilatation of the alae nasi, is speech short and quick, can the patient count to 10 or 12 without taking a breath, can he whistle (this requires a deep inspiration followed by a fixed and an expanded chest), can he sniff or blow his nose? Homely little procedures, yet each one of them is so informative of the patient's respiratory ability. A more accurate and scientific indication for the need of the respirator is a determination of the patients vital capacity. When the vital capacity is at two-thirds to one-half of the predicted value, rest periods in the respirator are indicated. If the vital capacity falls to one-third or one-quarter of the predicted value, continuous care in the respirator is in order.

When it is anticipated that the patient may require respirator care, it is advisable to explain why it is needed and then place him in the respirator for short periods of time. This accomplishes two important things: (1) the patient realizes that he has been in and out of the machine and, therefore, should the time come when he has to remain in the respirator, psychological shock is avoided, (he knows that he has been in and out!); (2) the patient learns to accommodate and to adjust himself to this method of artificial respiration. When the condition of the patient permits, he should be given frequent periods out of the machine, as, again, this restores his confidence and facilitates his subsequent complete removal (so-called "weaning") from the machine. Close clinical observation and repeated vital capacity determinations will indicate when this end can be realized.

There are several methods of artificial respiration available to the patient with acute poliomyelitis but it is generally believed that the tank respirator is more efficient and therefore the one of choice during the early phase of respiratory involvement. The use of chest respirators or cuirasses are of more value in the later care, i.e., after the acute phase has passed, and are of two types. One cuirass type covers the chest wall and extends for a short distance over the upper abdomen, and is about 47% as efficient as the tank respirator. The other cuirass covers the chest and the abdomen, and is 61% as efficient as the tank. The rocking bed occupies about the same position in ventilatory efficiency as the chest respirator, and is of real value following the use of the "tank". The electrophrenic respirator[7] which by electric stimulation of the phrenic nerve produces rhythmical contractures of the diaphragm and at the same time inhibits phrenic impulses arising from

above the point of the application of the electrode. This machine may in certain types of respiratory paralysis prove of live-saving value.[8] When the above means of establishing artificial respiration are not available, positive pressure breathing can be instituted by the use of anesthesia machines after the introduction of an endotracheal tube.

Medical care during that period when the patient is in the respirator requires expert clinical experience as well as unique nursing. When possible, a "seasoned" team should be in attendance. The importance of postural drainage and intelligent suctioning of the pharynx when this structure has become paralyzed or obstructed has already been mentioned, but it is important to state that involvement of this area frequently occurs in association with involvement of the intercostal and/or diaphragmatic muscles—and, of course, in "bulbar" poliomyelitis. Therefore, the same techniques of care apply when the individual is in the respirator. Oral feedings, and this includes gavage feeding, should be avoided for the first few days as the danger of vomiting and resulting aspiration is paramount. Hypoventilation as well as hyperventilation have to be carefully watched, as either may jeopardize the patients course. It is essential that an adequate airway be maintained at all times, and this involves removal of secretions, the prevention of obstruction resulting from paralysis of the abductor muscles of the vocal cords, posterior displacement of the tongue with resulting obstructions, etc.

The respiratory rate as well as the pressures of the respirator must be established for each individual and is based primarily on age. The child is usually comfortable with a respiratory rate of 24-30 per minute and a pressure of —12 cm. of H_2O to +5, whereas the needs of adults are met by a rate around 18 and a pressure of —18 to +6-8. More recently Ferris[9] and his co-workers have advocated that the tank pressure should be increased to its full range for three breaths 3-4 times a day as this tends to maintain the normal compliance of the lungs and chest wall and prevents fixation of these structures.

While in the tank respirator the patient needs the best of nursing attention not only as it concerns the changes in position (from back to chest), the skin, sweating, high temperatures within the machine, but also as it concerns anticipating impending danger. There are few circumstances where such expert care is more essential to the course of the disease and it is indeed regrettable that more hospitals do not take advantage of the many opportunities available for the training of nurses in the care of these patients. (Many hospitals refuse this opportunity for fear that the nurses may contract poliomyelitis.) (Florence Nightingale?)

Following the acute phase necessitating the respirator comes the question and the method of divorcing the patient from the "iron lung"—the so-called "weaning period." This has been mentioned previously, and it is here that the use of the cuirasse and the rocking bed play one of their most important roles in the care of the patient with poliomyelitis.

The question of tracheotomy: There is one and only one answer to the need of this surgical procedure —inability to maintain an adequate airway. Obstruction to the airway may result from many disturbances, and the final decision must rest upon the opinion of the individual physician. Many writers have made as many statements as to its indications, but certainly there are probably as many local circumstances that may have prompted these statements. One feels fairly confident in stating that this procedure is rarely necessary when the involvement is that of the pharynx only, for, as a rule, intelligent medical and nursing care employing postural drainage and suctioning of the pharynx precludes the necessity of tracheotomy. One hears and reads a great deal about the "prophylatic tracheotomy" that is so frequently employed in certain sections of the country. Complications following such a tracheotomy are rarely mentioned—if ever—and such a procedure in no way decreases (although this has been considered as one of the indications) nursing care—in fact, it would seem to increase it.

It not infrequently happens that when a tracheotomy is performed it is done as a last heroic measure, and at a time when the patient is already in the respirator. Obviously this places the surgeon at a great disadvantage as the physical construction of our present day respirator does not lend itself very well for operative procedures on the neck. Therefore, when possible, this operation should be performed before the need of artificial respiration becomes acute and at a time when it can be executed under proper surgical conditions and with adequate time. The introduction of the tracheotomy tube narrows the lumen of the trachea and thereby increases resistance to respiration, i.e., more effort is required for adequate ventilation. For this and other reasons, there are some observers—usually physiologists rather than physicians—who advocate that as large a tube as possible should be inserted. This is not without its danger for with edema of the

mucous membrane and mechanical irritation by the tube both at the point of insertion and on the posterior wall of the trachea, ulceration may occur with its resulting complications. The patient who requires the presence of the tube for a long period of time is of course subjected to an increased hazard of this complication.

Patients with disturbances in respiration resulting from involvement of the *respiratory center* present one of the most difficult problems in acute poliomyelitis. As a result of their irregularity in rate, rhythm and depth of respiration, they very quickly become critically and desperately ill. Placing these patients in a respirator offers little if any aid as they are unable to coordinate or to synchronize with the rhythm or rate of the machine. Sedation by means of morphia or other drugs has been employed in an effort to completely remove the influence of the respiratory center and thereby allow the respirator to "take over" respiration independently, but this has not proven successful. I have seen a few instances where the electrophrenic respirator was able to establish independent respiration and thereby carry these patients through the immediate emergency—certainly it is worth trying under such dire circumstances. Unfortunately, patients with involvement of this center usually have other disturbances, such as pharyngeal paralysis with pooling of secretions and airway obstruction, all of which adds to the acuteness of the emergency and the distress of the patient. In fact, one can truthfully say that the majority of patients with bulbar poliomyelitis present a clinical picture of diffuse involvement of the central nervous system and only rarely that of a single clear cut type. In spite of all efforts, the prognosis in this group of patients is indeed poor.

Disturbances in the respiratory center are frequently associated with or accompanied by similar dysfunction of the *circulatory center* as manifested by florid facies, rising blood pressure with a decreased pulse pressure, rapid and irregular pulse, anxiety, restlessness, and apprehension. It is possible that the association of the two clinical types may in effect be due to the anatomical proximity of the two centers. Certainly the combination of the two favors a poor prognosis. In this type of involvement the patient not infrequently develops a sudden state of shock—with circulatory failure, coma and death. The usual procedures employed to combat this state, i.e., warmth, plasma, albumin, stimulants, steroids, norephedrine, as well as those measures directed towards alleviation of pulmonary edema, are usually of no avail.

Finally, there is that group of patients who present signs and symptoms suggestive of encephalitic involvement. These are usually clinically manifested by hyperexcitability, mental confusion that is often extreme in nature, convulsions, muscular tremors frequently followed by lethargy, somnolence, coma, and death. And here, again, other manifestations of bulbar involvement are usually present. It should be stated that there are some who are of the opinion that the above symptoms are more often manifestation of hypoxia rather than true encephalitic involvement. The administration of oxygen may be of diagnostic value in answering this question.

Of late attention has been directed towards the home care of the acute non-paralytic poliomyelitis patient, and I think that much can be said in its favor. Such care *is only possible* when the physician is *in ready call distance* and can see the patient daily or even more often if necessary. Second to this should be the readily accessible hospital staffed and so equipped that it can meet with the medical or surgical emergencies that may suddenly develop. Such care has many advantages which concern not only the psychological effect upon patient and family brought about by separation and fear of the disease, but also as it concerns the financial burden as well.

One would be remiss if he failed to call attention to the importance, *and this is real,* of the "follow-up"[10] care of the patient diagnosed as having had acute non-paralytic poliomyelitis. This is as important as the care during the acute phase, and, if neglected, may easily result in a physical handicap that could have been prevented had the patient been seen by a competent orthopedist and a physiotherapist well-trained in this field. These patients should be seen at regular intervals for a period of not less than two years, and preferably even over a longer period.

Appendix: I have tried to stress the importance of "combined operations" in the care of the patient with acute poliomyelitis and am taking the liberty to attach as an appendix the procedure of management that we have prepared for our "house staff". It should be kept in mind that this is subject to the approval of the physician and orthopedist in charge of the respective services.

"Rule regarding the management of patients with poliomyelitis or those suspected of having the disease."

Since the management of poliomyelitis cases requires a team comprised of pediatricians, orthopedists,

otolaryngologists, anesthetists, physiotherapists, social service workers and the facilities of an Isolation Service, certain standard procedures must be followed if the team is to function well as a unit. Therefore, for the benefit of new house officers, the rules which have been evolved for the management of acute poliomyelitis at the Children's Medical Center are listed.

1. All suspected cases of acute poliomyelitis are seen on arrival in the Isolation O.P.D.
2. All cases are seen initially by the Medical Assistant Resident covering the Isolation Service.
3. If, in his opinion, sufficient evidence for suspicion of polio exists, the orthopedic resident covering Isolation consultations sees the patient *prior to* a diagnostic lumbar puncture. This procedure cannot be over-emphasized, as lumbar puncture frequently complicates orthopedic examination.
4. Disposition of patients seen in the Isolation O.P.D. will be arranged by the medical assistant resident with concurrence of the orthopedic resident involved. In the past, practicing physicians in the community have enjoyed the privilege of referring children to the Isolation O.P.D. for the diagnosis of poliomyelitis. The decision as to the indication for lumbar puncture lies with the medical resident. In general, all patients referred have this procedure done unless it is obviously not indicated or is contraindicated. This arrangement has worked to the benefit of all concerned and should be encouraged. Patients who do not appear to have polio are managed in accordance with the usual routines of the Hospital, either being admitted to another Ward, returned to the care of their private physician, or sent to the medical O.P.D. for further study.
5. Patients who, after lumbar puncture, have suspected or obvious acute poliomyelitis are admitted to Division 37,* and the *referring physician notified by telephone.*
6. Patients who are at least 7 days past the onset of symptoms or who have been 48 hours without fever are not necessarily admitted to Division 37. They may be admitted to the Convalescent Polio section on Division 36,** or other designated wards under the care of the Orthopedic Service. (Division 37 is for acute febrile polio patients or those in respirators who cannot be transferred.) If the available data is inconclusive or if there is reasonable doubt about date of onset, the patient is admitted to Isolation for a 48 hour period of observation.
7. On Division 37 all patients are the primary responsibility of the medical assistant resident and interne. Day to day consultation is made with the orthopedic resident who gives consultative advice regarding orthopedic care. All orders are to be written by the responsible medical house officers.
8. The full facilities of the Polio Social service are available and are used. Polio Social Service is notified as soon as possible after the patient has arrived. In obvious cases the parents are seen by the Polio Social Service worker on admission in the Isolation O.P.D.
9. The full facilities of the Physiotherapy Department are utilized while the patient is on the Isolation Service according to the advice of the Orthopedic Service.
10. Patients are considered over the infectious stage of the illness when they have been:
    1. *48 hours without elevated temperature,* or
    2. After *seven days* have elapsed from the onset of the illness and the patient afebrile.

    At this time arrangements for transfer to Division 36 or discharge can be made depending upon the opinion of the orthopedic service. No patient with acute or chronic respiratory infection is to be transferred to Division 36, as respiratory infections are a serious hazard to patients on this ward.
11. Bulbar and respiratory cases are cared for by the Medical Service on Division 37 until the patient is well stabilized—i.e., handling secretions well and/or able to swallow safely. At this time transfer to Division 36 is effected if orthopedic care is indicated. Patients who have continuing respiratory difficulties and require additional orthopedic care are to be transferred to Division 36 with consent of the orthopedic resident. Patients who have had bulbar poliomyelitis but present no problems requiring further hospitalization may be discharged home from Division 37.
12. Patients transferred to Division 36 are on the Orthopedic Service and all orders are written by the orthopedic residents. These patients are followed by the Isolation Medical Service in a consultative capacity only.
13. Patients with non-paralytic polio may be dis-

*Division 37—Isolation Ward

**Division 36—Orthopedic Ward

charged directly from Division 37 only after they have been cleared with the orthopedic service. As a general rule all arrangements for discharge should be made by the orthopedic service to insure proper "follow up" by this service.

14. On Division 37 patients are cared for under group precautions provided all such cases are diagnosed as acute poliomyelitis. In those instances in which the diagnosis is uncertain the patient should be on individual precautions until a definitive diagnosis is made. As soon as possible a decision should be made, since patients on individual precautions tie up too many beds and complicate nursing care.
15. All patients suspected of having polio are reported to the Commissioner of Health of the State *at the time of admission* on the appropriate "form" supplied for this purpose.
16. Private patients are under the care of the private physician but the responsibility for immediate therapy remains with the medical and orthopedic services. This is particularly important in bulbar and respirator cases where prompt and immediate care may be necessary.
17. *Special care of Bulbar and Respiratory Cases:* In these potentially serious cases certain special precautions should be taken:
    a. The special consultant for the Medical Service should be notified immediately. In those instances in which there is laryngeal obstruction the resident of the ENT service should see the patient and consult with the chief of his service.
    b. Whenever a patient is placed in a respirator the ward consultant must be notified. The same applies to the demise of a patient.
    c. There is a room on Division 37 for house officers. The Medical House Officer is to sleep in this room if acutely ill patients with bulbar type of polio or those with intercostal or diaphragm paralysis are likely to need prompt care.
    d. All medical house officers on Division 37 are to be familiar with the use of the electrophrenic respirator, tank respirators, laryngoscopes and tracheotomies, and the location of this equipment.

Bibliography

1. Russell, W. R.: Poliomyelitis: The Pre-Paralytic Stage and the Effect of Physical Activity on the Severity of Paralysis. Brit. M. J., 2: 1023, 1947; ibid., Paralytic Poliomyelitis: The Early Symptoms and the Effect of Physical Activity on the Course of the Disease. Brit. M. J., 1: 465, 1949.
2. Horstman, M. V.: Acute Poliomyelitis: Relation of Physical Activity at the Time of Onset to the Course of the Disease, J.A.M.A., 142: 236, 1950.
3. Cook, C. D., *et al.*: Gastro-Intestinal Lesions in Acute Bulbar Poliomyelitis. Pediatrics, 7: 415, 1951.
4. Baker, A. B., Bracon, I. A., and Cornwell, S.: Poliomyelitis: VII. Gastrointestinal Disturbances. Their Relationship to Lesions in the Hypothalamus. J. New and Ment. Dis., 116: 715, 1952.
5. Robertson, H. E., and Chesley, A. J.: Pathology and Bacteriology of Acute Anterior Poliomyelitis. Arch. Int. Med., 6: 233, 1910.
6. Weinstein, L., and Shelokov, A.: Cardiovascular Manifestations in Acute Poliomyelitis. N. E. J. Med., 244: 281, 1951.
7. Sarnoff, Stanley, *et al.*: Electrophrenic Respiration in Acute Bulbar Poliomyelitis. J.A.M.A., 143: 1383, 1950.
8. Macanlay, John C.: Phrenic Stimulation in the Treatment of Acute Bulbar Poliomyelitis. J.A.M.A., 155: 541, 1954.
9. Ferris, B. G., Jr.; Mead, J.; Whittenberger, J. L., and Sacton, G. A., Jr.: Pulmonary Function in Convalescent Poliomyelitis Patients: Compliance of the Lungs and Thorax. N. E. J. Med., 247: 390, 1952.
10. Maskowitz, E., and Kaplon, L. I.: Follow-Up Study in Seventy-five Cases of Non-Paralytic Poliomyelitis. J.A.M.A., 152: 1905, 1953.

Drug Therapy of Parkinsonism

THOMAS C. FLEMING, M.D.
Montclair, N. J.

PARKINSONISM continues to be a therapeutic problem to the practicing physician. For example, in admissions to a large center for chronic diseases, Parkinsonism ranked third, as a cause of disability, topped only by cerebrovascular accidents and malignant tumors.

In our present state of knowledge, the use of drugs for Parkinson's disease is at best symptomatic therapy. The response of different symptoms to available drugs varies considerably. And since the presenting symptoms of parkinsonism vary somewhat with the type of disease, it is necessary to consider the types of parkinsonism and their symptoms in order to discuss drug therapy effectively.

Classification

Parkinsonism is a symptom complex with several possible underlying etiological factors. From a clinical and therapeutic standpoint, it is most convenient to classify Parkinsonism into three main groups:

1. Idiopathic (paralysis agitans); 2. post-encephalitic; 3. arteriosclerotic; 4. miscellaneous, including trauma, poisoning, tumors, syphilis, *et cetera*.

The most important clinical differences in the three main categories are outlined in Tables 1 and 2.[1]

Symptoms

The four cardinal symptoms of Parkinsonism are rigidity, tremor, akinesia and loss of spontaneous movements.

As suggested, careful consideration of symptomatology is important in the selection of therapeutic agents. While there is a definite similarity in the over all symptom complex of Parkinsonism, certain features characteristic of the individual groups are evident, as shown in Table 3.[1]

Speech disorders and sialorrhea, for example, so prominent in the post -encephalitic Parkinsonism, are far less common in the idiopathic and relatively infrequent in the arteriosclerotic types. Tremor, on the other hand, is more characteristic of the latter two varieties.

Drugs Used in the Therapy of Parkinsonism

The five major types of chemical agents used in the treatment of this disorder are listed in Table 4.

It is interesting to note that up until about ten years ago, the only drugs available belonged to the potato plant category.

Effectiveness is not the only problem in the selection of drugs. Most of the agents in common use may cause one or more of the disturbing side effects mentioned in Table 5.

A. *Potato Plant Products*

I. *Scopolamine*—This drug is available in 1/200th grain, 1/150th grain and 1/100th grain tablets. Young patients may take 1/150th to 1/100th grain daily, increasing this gradually to as high as 1/50th grain three times daily. In older patients, a starting dose of 1/200th grain daily is advised, increasing this dose slowly to 1/200th grain three or four times daily. Scopolamine causes drying of the mouth and blurring of vision, but more disturbing are the dizziness, tachycardia, prostration, nausea and depression that may result, particularly in older patients.

II. *Atropine*—Atropine sulphate solution 0.5% which is of particular value in reducing rigidity in young idiopathics and in patients with post-encephalitic disease, is started at 3 drops three times daily. This is increased by one drop three times daily, until about 10 drops three times a day are reached. At therapeutic doses, atropine usually causes some blurring of vision and dryness of the mouth. The hazards of glaucoma and circulatory disturbances caution against the use of this drug in older individuals. Prolonged atropine therapy may also cause serious disturbance of gastrointestinal motility and secretion. In high dosage, nausea, vomiting and cerebral reactions are not uncommon.

III. *Stramonium*—This product contains atropine, hyoscyamine and scopolamine, and has a good action against tremor. Some authors feel that unlike scopolamine and atropine, stramonium may be tolerated by elderly patients. In tincture form, use 5 drops in water after each meal and slowly increase this dose to 30 to 60 drops three times daily.

IV. *Bellabulgara*—(A root extract of Bulgarian belladonna), *Zinobel*, (a root extract of domestic belladonna), and *Rabellon* (a synthetic derivative made from extracts of domestic belladonna) have about equal composition, containing atropine, hyoscyamine, and scopolamine and similar therapeutic effects in idiopathic and post-encephalitic Parkinsonism. The average doses are:

Read before the annual meeting of the Seaboard Medical Association, November 15, 1954.
Received for publication, November 27, 1954.

Bellabulgara —1/2 to 1 tablet three times daily
Zinobel —7 to 10, 0.4 mg tablets, daily
also available in 0.8 mg tablets
Rabellon —3 to 9 tablets daily.

NOTE: Start all drugs at low dose levels and increase gradually to average tolerated dose.

B. *Synthetic Antispasmodics*—Within the last few years, a variety of new synthetic antispasmodic compounds has been developed and recommended for the treatment of Parkinson's disease. Table 6 indicates the average dose of these agents.[2]

I. *Artane (Pipanol)*—Artane is an excellent all-around drug for the treatment of Parkinson's disease. It helps to relieve rigidity, akinesia, lethargy and oculogyria, although its effect in combating tremor is questionable. At the average dose level, the drug is usually well-tolerated and notably free from toxic effects on circulation. Artane is also a useful agent for combination therapy, as will be described. *Pipanol* is a drug with identical chemical and pharmacologi-

TABLE 1
DIFFERENCES AMONG THE THREE TYPES OF PARKINSONISM

Characteristics	Post-encephalitic	Idiopathic	Arteriosclerotic
Age of onset	20-35	40-55	55-70
Sex	Male ____ 61% Female 39%	Male ____ 67% Female __ 33%	Male ____ 62% Female __ 38%
Past History	Influenza Encephalitis	Good Health	Hypertension Cerebral Vascular Episodes Giddiness, Tinnitus Cardiovascular Disease

TABLE 2
DIFFERENCES AMONG THE THREE TYPES OF PARKINSONISM

Characteristics	Postencephalitic	Idiopathic	Arteriosclerotic
Prodromata	Lethargy Sluggishness Sialorrhea Monotone Speech	None	Akinesia Tiredness
First Symptoms	Rigidity and Postural Abnormality or Oculogyria	Tremor	Rigidity
Course of Symptoms	Progressive, but Very Slowly, with Long Stationary Phases	Slowly Progressive	Progression is Often Rapid

TABLE 3
SYMPTOMS OF THE THREE TYPES OF PARKINSONISM

Symptoms	Posten-cephalitic	Idiopathic	Arterio-sclerotic
Lethargy	100%	25%	
Oculogyria	40%		
Strabismus	20%		
Pupillary Abnormalities	75%		
Weakness of Ocular Converg.	100%	25%	
Rigidity	60-70%	70-90%	100%
Tremor	50%	100%	70-90%
Akinesia	100%	50-75%	90-100%
Sialorrhea	100%	25%	10% ?
Speech Disorders	75-90%	25%	10%
Dysphagia	Occasional	Occasional	25-40%

Table 4
Types of Drugs Used in Therapy of Parkinsonism

A. Potato Plant Products
B. Synthetic Antispasmodics
C. Synthetic Antihistamines
D. Synthetic Cerebral Stimulants
E. Combinations of Drugs

cal properties, which is administered in the same dosage as Artane. Post-encephalitic cases require much higher doses of both Artane and Pipanol than do the idiopathic or arteriosclerotic type.

Table 5
Side Reactions to Antiparkinson Drugs

Dryness of mouth
Blurring of vision
Nausea
Cerebral reactions (mental confusion, dizziness, depression)
Weakness, prostration
Tachycardia

II. *Cogentin* (formerly known as MK-02). Cogentin is one of the newest additions to the field, and from preliminary reports appears to offer a significant contribution. Chemically, the compound (tropine benzohydral ether) is interesting in that it is a combination of an atropine and a benadryl molecule, as shown in Figure 1.

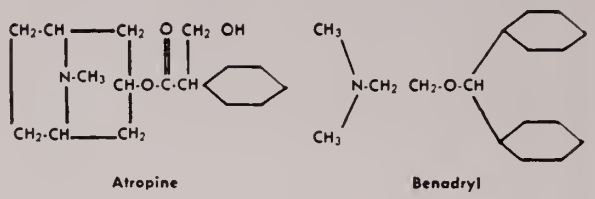
Table 6
Synthetic Antispasmodics

Drug	Dose
I. Artane (Pipanol)	2 to 5 mg. two or three times a day
II. Cogentin (MK-02)	1 to 2 mg. on retiring or twice a day
III. Diparcol	1 tab. three to four times a day
IV. Pagitane	1.25 or 2.5 mg. twice a day
V. Panparnit	One 12.5 mg. tab. three times daily to one 50 mg. tab. four times daily
VI. Parsidol	50 mg. three to eight times a day
VII. Mephenesin	.25 and .5 gm. tab.; average daily dose 3 to 5 gm.

Cogentin has excellent effect in post-encephalitic rigidity and in the severe or major tremor of the arteriosclerotic. Side effects are minimal in all types of patients, and except for some dryness of the mouth and occasional listlessness, there are generally few difficulties. Like Artane, Cogentin is ideally suited for combination therapy.

III. *Diparcol*—This is a powerful muscle relaxant, with almost curare-like effect. Diparcol has such promient side effects, however, that its use is almost limited to post-encephalitic cases, with high drug tolerance. The drug is not available commercially.

IV. *Pagitane*—(formerly known as antispasmodic compound 08958). Pagitane is similar chemically and therapeutically to Artane and Pipanol, although it may be somewhat more effective in controlling tremor. Results in oculogyria are also very good. Side effects are more evident than with Artane and include dryness of the mouth, dizziness, blurring of vision, nausea, weakness, and more serious reactions such as confusion and disorientation, particularly in the older arteriosclerotic patients.



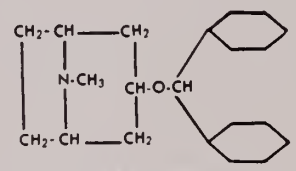


Figure 1.

V. *Panparnit*—This drug is a good relaxant, but limited in its use by side reactions, such as nausea, vomiting, dizziness, weakness, diaphoresis, headache, palpitation, blurring of vision, diplopia, and dryness of the mouth. Panparnit is best reserved for young, post-encephalitic patients who do not respond to other therapy.

VI. *Parisodol*—(formerly known as Lysivane, W483). This newly released drug appears to be of particular value in controlling tremor and rigidity. Side effects are seen more frequently than with Artane and may be quite disturbing in older patients, especially the mental and eye reactions. Parsidol may effectively be combined with other drugs.

VII. *Mephenesin* (myanesin)—Introduced under the trade name Tolserol, mephensin is a synthetic muscle relaxant which may be helpful for this purpose, particularly as an adjunct to physiotherapy. However, the dose is high (3-6 grams daily) and the drug may cause nausea and vomiting. It is more useful combined with other drugs.

Selection of Antispasmodic Drugs

It is obviously impossible to rigidly define the drugs of choice for the control of the various symp-

tom complexes known as Parkinsonism. No one list would meet the approval of any two clinical observers in this field. Based on what has just been said concerning these agents, however, a very rough and tentative selection can be attempted on the basis of therapeutic effects balanced against toxicity. See Table 7.

TABLE 7

To Combat Rigidity						
Cogentin			+	+	+	+
Thephorin	+	Artane	+	+	+	
Atropine			+	+	+	
Artane			+	+		
Pagitane			+	+		
Parsidol			+	+		
To Combat Tremor						
Scopolamine			+	+	+	+
Parsidol			+	+	+	
Benadryl			+	+		
Cogentin			+	+	(Major Tremor)	
Stramonium			+			
Pagitane			+			
Artane			+	(?)		
To Combat Akinesia and Lethargy						
Dexedrine			+	+	+	
Artane			+	+		
Pagitane			+	+		
To Combat Oculogyria						
Artane			+	+	+	
Pagitane			+	+	+	

C. *Synthetic Antihistamines*

I. *Benadryl*—This drug is well known as one of the first antihistamine agents. It has anti-tremor and some anti-rigidity properties, but also possesses the disadvantage of causing drowsiness. Its major use is in early cases, or in combination with the atropine-like or synthetic agents.

II. *Thephorin*—While Thephorin is not particularly effective when used alone, it is an excellent agent when combined with the synthetic antispasmodics, particularly Artane. Thephorin has the advantage of not causing drowsiness, as do the majority of other antihistamines. Several authors[3,4] consider the combination of Thephorin and Artane one of the most effective measures for the control of Parkisonism. The average dose is one 25 milligram tablet three times daily.

D. *Synthetic Cerebral Stimulants*

For patients who complain of lethargy, fatigue, weakness or depression, the addition of one of the reliable central stimulants such as Dexedrine, may be very helpful.

E. *Combinations of Drugs*

Throughout this discussion, reference has been made to combination of the various therapeutic agents. Thephorin with Artane has been mentioned by several authors as a combination of choice. Obviously, innumerable other choices exist and one might select as an example, the combined use of Artane (for its general effect), scopolamine (for severe tremor) and finally plus Cogentin (to relieve severe rigidity and spasm).

CONCLUSION

A brief review of drugs available for the therapy of Parkinsonism has been presented. The older potato derivatives still occupy an important place in the management of this disorder. However, many new synthetic agents have been introduced which deserve a high position on the list of useful products.

BIBLIOGRAPHY

1. Doshay, L. J., Ed.: Parkinsonism and Its Treatment. Philadelphia, J. P. Lippincott, 1954.
2. Doshay, L. J.: Problem Situations in the Treatment of Paralysis Agitans, J.A.M.A., 156: 680-684, October 16, 1954.
3. Effron, A. S.: How to Treat Parkinsonism, G.P., 4: 61, 1951.
4. Schwab, R. S.: Current Therapy. Philadelphia, W. B. Saunders Co., 1954, p. 711.

93 North Mountain Avenue.

TV Cameras Focus on AMA Annual Meeting

What goes on behind the scenes at the world's largest medical meeting will be the theme of the "March of Medicine" telecast on Tuesday, June 7. This third program in the 1955 spring series of "March of Medicine" shows will be beamed directly from the convention halls of the AMA's 104th Annual Meeting at Atlantic City. Sponsored by Smith, Kline and French Laboratories in cooperation with the AMA, the live telecast will be carried over the NBC-TV network at 9:30 p.m. EDT, replacing Armstrong Cork Company's "Circle Theater."

Outstanding scientific features of the meeting will be presented for the benefit of those physicians unable to attend the meeting as well as the interested general public. Check local newspapers for time and station in your area.

Allergic Reaction to Pantothenic Acid

ASHER A. FRIEDMAN, M.D.
Norfolk, Virginia

IN THE search for safe and effective skin therapy, many agents of widely varying chemical composition have been introduced. Their rate of cutaneous sensitivity has always been a problem and, indeed, reactions to many of the compounds have caused more trouble than the original dermatosis. Recently, one of the factors in the vitamin B complex, pantothenic acid and its active alcohol fraction Pantothenyl, has been used as a local topical medication in a variety of dermatoses.[1] Panthenol, in the form of Panthoderm* Cream, has been reported as very effective in conditions requiring stimulation of granulation and epithelization, such as hypostatic eczema, varicose ulceration, chronic eczemas, etc., with no evidence of sensitization.[2,3]

Since this drug is potentially such a widely used preparation, report of a definite case of sensitivity seems warranted. It is intriguing that a vitamin can cause true allergic sensitivity.

Report of a Case

Mrs. L.L., 58 year old white female, was seen July 15, 1954, for an eruption of the left leg of ten years duration. The eruption involved the anterior leg from the ankle to the knee, covering the entire anterior portion and encroaching posteriorly. It consisted of a confluent infiltrated, erythematous eruption with secondary oozing and crusting. The patient had been treated by many physicians and received X-ray therapy, a multitude of local preparations, ultra-violet, etc. The diagnosis was a chronic eczema of the neurodermatitic type. Because of the multitude of therapy in the past and because of the successful reports in hypostatic eczemas[2], Panthoderm Cream was tried. Definite improvement, both objectively and subjectively, resulted in two weeks trial. The patient was instructed to continue to use the drug daily. On September 27, 1954, the patient returned with an acute eczematous, edematous reaction of the leg. Panthoderm was stopped and the acute reaction subsided in one week. Patch tests were then performed to the Panthoderm Cream, to alpha Panthenol, and to the ointment base.[4]

Forty-eight hour patch tests resulted in 1+ to Panthoderm Cream, 2+ to alpha Panthenol, negative to the ointment base.*

*Panthoderm Cream—U. S. Vitamin Corporation, 250 East 43rd St., New York 17, N. Y.

Received for publication, December 27, 1954.

Summary

A case of allergic sensitization to Pantothenic acid has been reported. The possibility of unfavorable reactions to a seemingly benign drug—a vitamin—should be borne in mind when using local medication for the skin.

Bibliography

1. Kline, P. R., and Caldwell, A.: Treatment of Various Dermatoses with Topical Application of Panthenol, N.Y.J. Med., 52: 1141 (May) 1952.
2. Combes, F. C., and Zuckerman, R.: J. of Inves. Derm., 16: 379 (June) 1951.
3. Welsh, Ashton L., and Ede, M.: Arch of Derm. & Syph., 69: 732, 1954.

*Materials for testing were supplied by the U. S. Vitamin Corporation.

207 West York Street.

Annual Meeting—The Medical Society of Virginia

October 16, 17, 18 and 19, 1955

Richmond, Virginia

Medico-Legal Notes . . . .

Malingering and Neurosis

Every general practitioner—and many specialists—has to decide from time to time, whether the "functional" symptoms following an accident are neurotic or whether they are malingered. Typically, what happens is that, after the accident, the patient complains of such symptoms as headache, nervousness, spots before the eyes, vertigo, weakness, impaired memory and so on. Neurologic examination and other specialized studies are negative. The plaintiff's attorney agrees this is true but argues that the symptoms are part of a psychoneurosis and, as such, are genuine symptoms. The defense attorney retorts that the symptoms are malingered, that they are willfully assumed in order to collect insurance benefits or bolster a claim for damages.

The following is a pattern of distinction between malingering and psychoneurosis. While not 100 per cent applicable, it should be found useful in many border-lines cases.

1. A malingerer retains his ability to play while claiming inability to work. If the patient attends ball-games, follows television, or plays cards with obvious zest, it is unlikely that he is a neurotic. The attorney should be asked to ascertain the facts here. As with all these criteria, this is not a completely fool-proof conclusion, but it is one point.

2. The neurotic rather likes medical attention. He is faithful in swallowing medicine, taking injectons and visiting the office or clinic. The malingerer is always a little annoyed at the need of taking medication and tries to avoid or evade it.

3. The malingerer is not recruited from the ranks of the adequate, honest and responsible part of the population. The opposite does not prove malingering, since neurosis may also develop in people who are inadequate and irresponsible. The criterion, however, does have negative value. If the patient's life history is that of conscientiousness and responsibility, malingering is unlikely.

4. The neurotic often has dreams and anxieties which relate to the accident. The physician should seek information here (best from relatives) rather indirectly. Obviously the direct and leading question ("do you have dreams about the accident?") would provoke an affirmative answer in the malingerer too. The true neurotic often volunteers such data or gives other evidence of anxiety about the accident.

5. Psychologists now have a battery of projective tests (such as the Rohrschach) which give rather typical neurotic patterns in neurotic patients. The malingerer shows the personality structure of the normal or of the psychopath. Psychologists who can administer and interpret such tests are available on any university campus or in any large city. In doubtful cases, it is good to have a psychological study made.

6. The malingerer is usually unwilling to submit to an operation or lumbar puncture. The neurotic is, typically, eager. Suppose a patient complains of backache. If a fusion operation is suggested, the malingerer is usually aggressively resistant to it. The neurotic may welcome it. Again this is not 100 per cent true, but it is an additional point.

7. If at each interview the doctor asks the patient to tell again the details of the history, the malingerer tells the same story, usually verbatim, and rather sullenly. The neurotic characteristically shows variations each time he tells the story but is eager to tell it and shows differences in emphasis from day to day.

8. Anxiety is the hall-mark of psychoneurosis. The experienced psychiatrist can distinguish between the true anxiety of the neurotic and the truculent irritability of the malingerer.

9. Eagerness for re-examination and satisfaction at being the subject of consultation and group study are more consistent with psychoneurosis. Under such conditions (that is, frequent re-examination and group consultation), the malingerer is resentful and suspicious. The neurotic is rather proud.

There are a number of features common to malingering and psychoneurosis. The doctor should not be misled into diagnosing one for the other because of these common symptoms. Features found in both neurosis and malingering are: (a) subjective complaints are out of proportion to objective findings; (b) neither patient loses weight although he complains of disability, illness, and distress; (c) similarly neither patient really looks sick; (d) both patients are responsive to leading questions. If, for

Contributed by HENRY A. DAVIDSON, M.D., *Instructor in Legal Medicine at the Medical College of Virginia. The author of the standard text, Forensic Psychiatry (Ronald Press, New York 1953), Dr. Davidson is Assistant Superintendent at the Essex County Hospital in Cedar Grove, N. J.*

instance, the doctor asks about convulsions by describing them—if he says "did your face twitch?"—the patient, whether a malingerer or a neurotic, is likely to say "yes"; (e) each patient has a sense of grievance against the person who caused the accident or against the employer; (f) a background of personal inadequacy may be found in both malingerers and neurotics; and (g) in both types of patients the symptoms are unphysiologic.

Even when the doctor is convinced that the complainant is a malingerer, he does well to avoid that blunt term. Neither in his report to the lawyer nor in his testimony on the stand should he use the word "malingerer". To call a man a malingerer is to call him a cheat. This is an actionable defamation if the patient can show that it is untrue. It is better to say and write something like this "I am unable to verify this patient's complaints", or "I cannot find any injury or disease to account for the symptoms".

Drugs in the Revolutionary War.

Epsom salt, glauber's salt, castor oil, mercurial ointment, adhesive plaster, and cinchona bark were among the drugs used most during the American Revolutionary War. This information has been confirmed through the examination of some 1776 account records of a Philadelphia apothecary shop made by George Griffenhagen, associate curator of the Smithsonian Institution's Division of Medicine and Public Health. The report was made public in the latest issue of the Journal of the *American Pharmaceutical Association.*

The story of how the American Revolutionary Army was crippled by lack of medical supplies and by internal feuds within the medical department has been previously reported, but information about the all-important regimental medicine chests used by the Continental Army has been sketchy. The complete inventory of some 20 medical chests that were furnished the Continental Congress for the newly organized regiments from New Jersey, Pensylvania, Virginia, and North Carolina, have been revealed through the study of the *Waste Book of the Marshall Apothecary Shop,* which is preserved in the Historical Society of Pennsylvania.

The records show, says Mr. Griffenhagen, that cathartics were the leading medicine employed by the American forces of 1776. The regimental chest included 10 pounds of epsom salt; 10 pounds of glauber's salt; 1¼ pounds of castor oil; 1½ pounds of aloe; 2 pounds of jalap; and 1 pound of rhubarb. Sedatives were few, including only 8 ounces of opium and 12 ounces of tincture of opium for an entire regiment. Cinchona bark, from which quinine was later discovered, was in wide use, 4 pounds being contained in the Continental chest.

Surgical dressings included 10 pounds of tow (a type of cloth wrung out of hot water and applied as a stupe); 3 pounds of lint (a dressing made by scraping old linen cloth); and 6 pounds of adhesive plaster. Other external applications included blistering plaster and mercurial ointment. Pharmaceutical equipment included mortar and pestle, scales and weights, pill "tyle" and "spathula," and pill boxes; while surgical instruments included clyster pipe (for enemas), lancets (for bloodletting), brass tourniquets (for amputations), and a trepan (for drilling a hole in the skull).

The Smithsonian report concludes that the Continental chests of 1776 were much larger than originally thought, possibly explaining why so many were lost during the retreats of the American forces. A more exhaustive search for extant remains of these Continental medicine chests is now being made by Mr. Griffenhagen and Mr. Robert Davis of the Armed Forces Medical Museum.

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

Modification in Administration of Certain Projective Techniques

Each psychologist or clinician who uses projective techniques soon learns to devise what he considers to be the most expedient method of administering the particular test at hand. The considerations involve clarity, objectivity, keeping the material as unstructured as possible, and efforts to establish optimal rapport. As distinguished from the highly standardized intelligence tests, there are no specifically established formulations for administration and interpretation of projective methods. Success with projective procedures is dependent almost entirely upon the experience and skill of the individual psychologist.

This discussion is designed to indicate what the writer feels may represent both certain advantages and expediency in modifying the usual instructions and procedures in presenting projective material to individual patients. This applies only under certain conditions, and is recommended only for individuals who are thoroughly grounded and experienced in interpreting projective material. The modifications should never be substitutes for generally accepted methods which may be longer and more tedious, but undertaken for use when there is adequate rationale. Further, the modifications do not represent "short cuts", since any short cut is likely to penalize the effectiveness of the examiner's contribution. However, the suggested procedures may serve to decrease time-consumption for the psychologist, whenever they are applicable. This is particularly true in the mental hygiene clinics, where the shortage of personnel, coupled with work-load pressures, necessitate a careful expenditure of professional service.

The most widely used method for the Thematic Apperception Test is to present twenty pictures to the subject and ask him to make up stories for each of the pictures. Recording the subject's productions may be via electronic devices, longhand, shorthand, or having the subject write out his own stories. Each of these methods has its own advantages and disadvantages, but having the subject write his own stories is probably the least desirable of the series. There is an obvious reason for this; the subject is quite likely to concentrate on irrelevant material.

The indicated use for this test is quite varied, it may be diagnostic, or the need to tap social attitudes, but most of all, it is used to grasp unconscious nuances of interpersonal interplay for prospective therapeutic considerations. Those who use this technique are familiar with the fact that many times, regardless of the form of pressuring utilized, the desired quality of richness of projected material does not appear. The reasons for this are often multiple and related to several different variables, especially the variety of disturbance present in the patient.

The writer has found the following procedure to be fruitful with certain types of patients:

> Present the patient with twenty cards in one group. Ask him to look through the entire series, and then to go back and select five of the cards, and place them on the desk, face down. State that it doesn't matter which cards he chooses, nor for what reason. When this has been completed, present the patient with each of the five cards he has selected, one at time. Then ask, "I wonder if you would tell me a little bit about just what led you to select this particular card". When this feature is entirely explored, ask the patient to make up a title for the card, and proceed to the next one.

With this method, the examiner does not ask the patient to make up a story at all. Of course, the five cards selected can be used to make up stories in the usual fashion. But just asking what led the patient to select the card, one can obtain a remarkably good body of information about the patient. Frequently, the patient will say initially that he had no idea why he selected the card, or that it was just because the examiner asked him to select five cards. However, with a little careful pressuring and questioning, some reason is almost always discovered, and usually it is a reason of significance, though its significance may be partially or entirely unconscious. It would appear that one of the operative reasons for

**Article prepared by* ROBERT S. MCCULLY, *Clinical Psychologist, Portsmouth Area Counseling and Guidance Clinic, Portsmouth, Virginia.*

this includes throwing the patient on his own initiative, so to speak, making the situation less formally structured, and as with the Rorschach cards, most patients come up with responses, and these responses have degrees of dynamic significance. Patients who are negativistic about making up stories (especially when the cards do have consciously traumatic implications for them) are often less negativistic about the less formidable task of simply telling why they selected a particular card, and giving it a title.

It might be feared that the patient would be inclined to select the five cards which would be least traumatic. This may occur, but it alone gives you some information about the patient. However, the examiner has found that ordinarily patients do not select cards on the basis of evasive motives, but more often cards which have particular significance to them.

When the conventional method of making Thematic Apperception Stories is used, there will often be several or many of the themes which are of no particular use to the examiner for interpretation. The method of modification suggested herein sometimes serves to avoid that particular form of less useful material. The experienced clinician will be able to grasp and make use of the different forms of material which accompany the reason or reasons which the patient gave for selection of a particular card. The writer has frequently found the material to be rich and meaningful.

Having the patient make up a title for the picture often adds significantly to the body of material obtained. This is especially helpful in obtaining the mood-tone of the patient's affective experiencing at the time of testing. The titles often lend themselves to fruitful symbolic analysis.

The ultimate value of using this modification in the Thematic Apperception Test rests squarely on certain fundamental requirements. The examiner must be thoroughly familiar with this test on the experiencial level. He must have adequate familiarity with the symbolic meaning of the individual cards, a knowledge of what each card is expected to elicit, how different varieties of patients are expected to react to the cards, what the clichés are and the cliché meanings, and an adequate knowledge of the projective and symbolic idioms.

The Thematic Apperception Test should seldom be given in isolation, and should be part of a battery of testing techniques. The examiner often has a good idea of just how the patient is going to react to the Thematic Apperception Test from his performance on the Rorschach and/or Wechsler Scale. Constricted Obsessive-Compulsives, depressed and anxious patients, and suspicious Paranoids are not likely to give rich themes on the conventional Thematic Apperception. This is by no means always the case, but the modification suggested herein has often been fruitful with patients suffering from those disturbances. The same applies to circumstantial, pedantic individuals whose irrelevant ramblings may be an anathema to the examiner who foresees the time-consumption ahead on the conventional Thematic Apperception recorded in longhand. The examiner's experience should be the determining factor as to whether more advantage would be gained in using a modification or conventional method with the Thematic Apperception Test. Another important factor would be the particular goal for giving the test, and there is, of course, no contraindication against using both procedures.

The writer has not used this method in testing children with the Children's Apperception Test; however, it could perhaps be used to advantage in certain cases. Those who deal with children well know that you cannot judge so readily any pattern of expected reaction types to the individual cards of this test, and one can obtain much more valuable information about a child in his deviant or irrelevant pronouncements than in the Obsessive-Compulsive adult, whose verbal deviations are likely to be stereotyped and repetitive.

However, the writer has found the same sort of modification described for the Adult Thematic Apperception Test to be applicable to the Symonds Picture-Story Test for adolescents, including the same cautions and qualifications. In testing children below the adolescent years, it may be helpful to include three or four of the strongly Oedipal Symonds pictures along with the Children's Apperception Test. This often extends the richness and interpretative value of the material. It should be kept in mind that this will structure the response variety.

Each clinician who uses the Children's Apperception Test has his own technique of presenting the stimuli material, and this must be quite flexible to meet the demands of the highly variable patterns of disturbance in children who are admitted to the clinics. Those children who are bright or superior, in terms of intellectual capacity, are likely to give long, rich, and rapidly produced themes in response to the cards. It is often with this variety of child that the Children's Apperception Test is of most value, since the dull child has less imaginative

assets at his disposal.

The writer has found it useful to record the Children's Apperception Productions on the typewriter, thereby being able to capture certain factors which longhand would not allow, especially in the superior child who produces a great bulk of material at a rapid rate. At first view, typing while a child is attending to card-stimuli would seem to be introducing a new variable, annoying, and even disruptive of rapport. This may occur but on the whole such has not been found to be the usual case. Naturally, one must rely on experience as to whether it would be indicated to attempt to type the material, or write down what is said in an unobstrusive manner. Typing serves to call attention to the fact that the examiner is recording verbatum, and would seem hardly calculated to place the child at ease.

In the first place, the writer is of the opinion that the Children's Apperception Test should rarely be given on first interview, and it is assumed that when it is given, relative rapport has already been established. So, on the other hand, the writer has found that typing the material given to the Children's Apperception Test may operate as an advantage. This is in terms of both the extent of what can be recorded, and the psychological climate set up by using a typewriter. This assumes that case selection has been effected on sound experiencial judgment. In the bright child, who intends to cooperate, and takes an interest in the materials (and on whom there is an optimal expectation of obtaining the greatest interpretative results), typing what he says appears to lend an atmosphere of importance to the interview. The child often responds beautifully, he is placed in the position of controlling the interview, the examiner responds to his whimsy; and the child often gets the feeling that you are treating him as an adult (which may well be something he is longing for). In fact, the child may assume the role of the business executive who is dictating to his secretary, and often say, "Are you following me?", "You don't need to take this down", or "Let's see, where was I, what did I say last?". Thus, in some cases, typing the Children's Apperception responses, rather than setting up barriers, appears to increase rapport, and could conceivably be even therapeutic. This is by no means always the case, but this method of recording this form of projective material has often been beneficial in the writer's experience, and from several different standpoints.

The final modified approach to the conventional use of projective techniques involves the use of the Bender Gestalt. This test is most helpful in the adult and adolescent segments of the population, but may be used with some success in children (projectively) down to age ten. The modification suggested is already used by some clinicians, particularly in experimental studies. The method is simply to obtain a Recall Bender Gestalt. After the nine gestalten have been copied, ask the patient to draw from memory as many of the designs as he can. This method is advocated by Dr. Fred Brown, Professor of Psychology, New York University School of Graduate Studies, who has done a great deal of original research with this technique, most of which is not yet published. Many patients, particularly the rigid, perfectionistic compulsive or paranoid, spend a great deal of time copying the designs exactly, thus presenting material representative of their compulsive fronts of draftsmanship. This occurs despite anticipative instructions on the part of the examiner.

With the Recall Method, subjective distortions may appear, and they are the more important since the patient has had visual-motor practice with the nine figures already. This method will give some idea about the level of the patient's intellectual efficiency. The person of average intellect recalls five or six of the designs, the bright person seven or eight, and the superior person may recall all of the gestalten. Design seven is the most difficult to recall, and is almost never recalled (or is grossly distorted) in the true organic patient. The emphasis here is on intellectual functioning, not necessarily basic intellectual capacity, since emotional disturbance frequently interferes with recall functioning. In brief, the Recall Method serves to force the rigid perfectionist to drop his mask-like front, and may give some important clues regarding the dynamics under the overlay of defenses.

This discussion has been designed to delineate certain modifications which may be used in the presentation of projective materials to clinic patients. These procedures are especially adaptive to the thematic variety of techniques. They often serve to expedite the process mechanically, without limiting interpretative data. This occurs only under the conditions of adequate rationale and careful judgment. Follow-up studies, where the material obtained appeared significant in psychiatric utilization, have tended to validate these modifications.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Poliomyelitis in Virginia, 1954

Now that the year 1954 is far enough behind to feel that reports of all cases of poliomyelitis for the year have been received, we have been able to study the cases and to make some comparisons and observations.

TABLE I
PERCENTAGE DISTRIBUTION AND ATTACK RATES BY COLOR
VIRGINIA
1953 AND 1954

	1954			1953		
	Total	Rate	%	Total	Rate	%
Total	613	17.52		740	21.45	
White	548	20.14	89.4	689	25.33	93.1
Colored	65	8.34	10.6	51	6.55	6.9

We note that there were fewer cases in 1954 than in 1953 and that the attack rate was lower in the 1954 total and in the 1954 total, white. This brings out the fact that there was an increase in the attack rate among the colored population. The percentage distribution is reduced in the white population and increased in the colored population.

TABLE II
PERCENTAGE DISTRIBUTION OF CASES BY PARALYSIS
VIRGINIA
1953 AND 1954

	Number	%	Number	%
Paralytic	396	64.60	368	49.73
Non-Paralytic	217	35.40	370	50.00
Not Stated			2	.27
	613	100.00	740	100.00

It is evident that though there were fewer cases in 1954, the number of paralytic cases was greatly increased. This points out the severity of the disease during the past year.

TABLE III
PERCENTAGE DISTRIBUTION OF PARALYTIC AND NON-PARALYTIC CASES 20 YEARS OF AGE AND OVER
VIRGINIA
1953 AND 1954

	1953		1954	
	Number	% of Whole	Number	% of Whole
Total	103	16.78	114	15.41
Paralytic	76	12.38	60	8.11
Non-Paralytic	27	4.40	54	7.29

During the year it was apparent that many persons 20 years of age and over were being stricken with poliomyelitis and, of course, that the bulbar type was more apt to be present in this group. There was a percentage increase in the paralytic cases in this group, with a corresponding decrease in the non-paralytic cases. Poliomyelitis is attacking older people more frequently.

The encephalitic form of poliomyelitis was reported in a white female 67 years of age, the oldest to be reported in 1954. While no antibody levels were determined in this patient and no viral studies of the stools were made, the patient was hospitalized in one of the hospitals receiving and studying poliomyelitis cases and the diagnosis was definitely arrived at.

The youngest case to be reported was in a white male 20 days old. This was extremely interesting on account of the fact that there was paralysis in this very young infant and that his mother developed the disease three days after the onset in her son and had a non-paralytic case.

In spite of the severity of poliomyelitis in 1954, as evidenced by the increase in paralytic cases, the fatality rate was reduced from 4.05 in 1953 to 1.95 in 1954.

TABLE IV
FATALITY RATE FROM POLIOMYELITIS
VIRGINIA

	1953	1954
Deaths	30	12
Fatality Rate	4.05	1.95

It should be noted that Virginia participated in the Salk Poliomyelitis Vaccine field trials in 1954 and seven areas formed a part of the national group. Loudoun, Fairfax, Henrico, Chesterfield, Norfolk, Smyth and Washington (including the City of Bristol) Counties, and the City of Richmond were the areas in which the vaccine was administered to second grade children whose parents consented. The report on the evaluation of the Salk Vaccine has been made by Dr. Thomas Francis, Jr., and his colleagues and we are now in the midst of carrying out the nation-wide program of the National Foundation for Infantile Paralysis in administering the vaccine to children in the first two grades and in last year's field trial areas, to those in the 3rd and 4th grades.

Monthly Report of the Bureau of Communicable Diseases

	April 1955	April 1954	Jan.-April 1955	Jan.-April 1954
Brucellosis	0	2	5	9
Diphtheria	3	3	12	22
Infectious Hepatitis	134	417	607	2100
Measles	668	5531	1929	12750
Meningococcal Infections	14	7	42	50
Poliomyelitis	2	4	8	18
Rocky Mt. Spotted Fever	1	1	3	1
Streptococcal Infections (Including Scarlet Fever)	756	655	3572	2277
Tularemia	0	1	5	18
Typhoid Fever	3	3	17	15
Rabies (In Animals)	34	46	191	174

Shingles Responds to Gamma Globulin.

Five of six patients treated with gamma globulin were relieved of painful symptoms of herpes zoster, also know as shingles. Dr. I. Irving Weintraub, Gainesville, reported on the cases of the April 30th Journal of the American Medical Association. Gamma globulin has been used previously in treatment of measles.

In four of the six patients, a "dramatic relief of pain occurred within the first 24 hours." Skin outbreaks were stopped by the treatment and no further infection was seen. A patient whose skin eruptions had been present for seven days before treatment was relieved of pain in 48 hours. Complete healing of the eruptions required from one to three weeks. Only one patient, with nerve involvement, did not respond to treatment. All patients, except one hospitalized for bleeding skin eruptions, continued to work in spite of "extensive involvement" in some cases.

Herpes zoster is a virus infection of the nerves of the body or face which produces severe pain and scarring skin blisters.

Kidneys and Emotions.

Three medical researchers have found evidence that the kidneys, which help man adapt to his physical environment, also may help him to cope with the emotional problems of everyday life. They reported in the April 23rd issue of the Journal of the American Medical Association that kidney action is affected by anxiety, fear, anger, and other reactions to daily difficulties.

The kidneys maintain a balance of water and salts in the body. In some illnesses the kidneys "work overtime" to keep the necessary balance. Now physicians are learning that the kidneys are affected by everyday crises as well as disease crises. In 400 tests on five persons leading their normal lives, it appeared that when they needed "increased alertness and readiness for action," the kidneys helped them by damming up reservoirs of water and mineral salts in the body. When the crisis—a job problem, family illness, disapproval of colleagues—was over, the kidneys flushed the extra water and salts from the body.

Drs. William W. Schottstaedt, Oklahoma City; Harold G. Wolff, New York, and Major William J. Grace, now at Fort Knox, Ky., said kidney reaction to emotional warnings in daily living is similar to that in illness. In a pneumonia patient, for instance, the kidneys hold extra salts and water in the body during the danger period, and flush them out when the crisis is over, and they are no longer needed.

In the test cases, it was discovered that anxiety, tension, and depression caused retention of sodium and potassium salts and water. Feeling of relaxation, pleasant anticipation, anger, and excitement were accompanied by an increased release of water and mineral salts.

The physicians said the changes caused by the kidneys' action due to differences in eating or drinking were slight compared to changes caused by emotional situations. In normal persons, the changes are important in meeting basic needs. The physician studying these changes must know about the person's life setting and his reaction to it in order to study properly his physical difficulty.

The Medical Society of Virginia . . . .

The Council

The meeting of the Council of The Medical Society of Virginia was called to order by Dr. Carrington Williams, President, at 12:00 noon on Saturday, April 16th, at Society headquarters. The roll was called and a quorum announced. Attending were Dr. James P. King, Dr. Lewis Bosher, Dr. James Love, Dr. Guy Horsley, Dr. Wilkins J. Ozlin, Dr. Louis P. Bailey, Dr. Frank A. Farmer, Dr. McLemore Birdsong, Dr. James P. Williams, Dr. H. C. Bates, Jr., and Mrs. M. R. Emlaw.

First on the agenda was the matter of selecting a site for the 1957 Annual Meeting (to be approved by the House of Delegates) It was brought out that if suitable dates are to be secured, it will be necessary to schedule the meetings as far ahead as possible.

Dr. Love reported that his special committee had looked carefully into the possibility of a cruise convention and had found two principle objections: (1) commercial exhibitors are not too interested in a cruise, and (2) the cost is relatively high. There is also an indication that interest in a cruise is lacking.

In the ensuing discussion it was mentioned that the Shoreham, in Washington, was tentatively reserving the week of October 27 for the 1957 Annual Meeting. It was pointed out that the 1954 meeting was especially well received, and many members have requested an early return to Washington. It was then moved and passed that Council recommend the Shoreham in Washington as the site of the 1957 Annual Meeting.

A resolution from the Norfolk County Medical Society with reference to professional liability insurance was then read. The resolution called for an investigation by The Medical Society of Virginia concerning the possibility of securing group liability coverage on the national level.

Dr. Farmer reported that his special insurance committee was giving careful study to the liability insurance problem. He recently attended a meeting on the subject in Atlanta and brought home some interesting observations. Dr. Farmer believed that physicians are definitely interested in coverage which will provide the best possible protection and vigorous defense where needed, realistic rates, and the opportunity to secure the coverage without revising their entire insurance program. He went on to describe the Oklahoma group plan, and believed that Virginia should strive for a similar arrangement. Dr. Farmer was instructed to have his committee proceed as rapidly as possible in developing a plan for presentation to Council. The Secretary was instructed to inform the Norfolk County Medical Society of what has been accomplished thus far.

Considered next was a proposed agreement between The Medical Society of Virginia and the Virginia Chapter of the American Cancer Society. The agreement would have the Society approve Tumor Clinics and Diagnostic Tumor Clinics, which would then be eligible to receive financial support from the Virginia Chapter. The agreement further stated that the Virginia Chapter would be guided by the Society in deciding what services to pay for. Dr. George Cooper, Jr., Chairman of the Cancer Committee of The Medical Society of Virginia, wrote that he did not believe the Society would become entangled with anti-trust laws should such an agreement be adopted. He also wrote that the Cancer Society wanted the feeling of Council on such an agreement. It was then moved that Council approve the proposed agreement and recommend to the Cancer Committee that it introduce a resolution during the next session of the House of Delegates requesting approval of such an agreement.

Council then considered a resolution from the Norfolk County Medical Society which favored changing the tenure of office for members of the State Board of Health from 7 to 4 years. It was mentioned that Tidewater had not been represented on the Board for 34 years. It was the consensus that the matter needs careful study, with special consideration being given to the wording of the law with reference to state distribution, physician representation, term of office, reappointment, etc. It was then moved and passed that the matter be referred to the Legislative Committee.

Approval was requested for a "Directory of Services and Facilities for the Speech and Hearing Handicapped of Virginia" prepared jointly by the Virginia Council on Health and Medical Care and the Nemours Foundation. A motion was introduced stating that while the Society has no objection to such a directory, it would be quite difficult to check its contents for accuracy, and thus official approval is not practical. The motion carried.

A question of policy was raised with reference to physicians over 70 years of age wishing to join

the Society. It was pointed out that according to the By-Laws any member over 70 years of age, upon his request, may be exempted from the payment of annual dues. There has been some thought that a physician should belong to the Society for a specified minimum period before becoming eligible for dues exemption. Mentioned was the fact that many organizations require membership of from 5 to 10 years, regardless of age, before becoming eligible. It was moved that the matter be referred to the Judicial Committee. The motion carried.

A letter from the AMA concerning the National Conference on Physicians and Schools was brought to the Council's attention. It was pointed out that the Society had been urged to send a representative to the Conference, and it seemed desirable that the Society learn what is being done in this particular field. Dr. Williams stated that Dr. Charles Outland would probably attend the Conference as a representative of the Richmond Public School System. It was then moved and passed that Dr. Outland be appointed to represent The Medical Society of Virginia at the Conference and that one-half of his expenses ($80) be borne by the Society.

Notice was taken of the work being carried on by the Virginia Committee of the American Medical Education Foundation. It was mentioned that the Committee desires to carry on extensive promotional activities and had requested a special appropriation of $300 to carry it through the remainder of the year. It was moved and passed that this amount be appropriated.

Considered next was the new law of the State of Washington which authorizes disciplinary action against licensed physicians who are guilty of professional misconduct. It was the consensus that there is much to be said for such a law and that the legislative Committee should give it careful study. It was then moved and passed that the Legislative Committee be requested to study the Washington State law and make such recommendations as it believes advisable.

Dr. Birdsong mentioned the problems connected with the use of silver nitrate in the eyes of newborn infants and stated that there were definite disadvantages in such procedure. It was moved that the matter be referred to the Committee on Child Health for consideration and possibly the introduction of a resolution before the House of Delegates which would advocate amending the present law in such a way as to make possible the use of other means to prevent infection of the eyes of the newborn.

There being no further business, the meeting was adjourned.

Robert I. Howard,
Executive Secretary

Approved:
Carrington Williams, M.D.,
President

Help Your Medical School.

What is the National Fund for Medical Education? What is the American Medical Education Foundation? What justification has a state-supported medical school to reach out for contributions in addition to taxes?

These are all valid questions. They are repeatedly asked.

In the years following World War II, medical schools in the United States have encountered financial difficulties actually jeopardizing their existence. In 1950 and 1951, an overwhelming number of these schools supported a Federal Bill to Aid Medical Education, in spite of all the reservations in the minds of their administrative officers and boards of trustees.

Opposing this Bill were responsible men and women in medicine and industry who also realized that alternative methods of support must be found, or this proposal in some form would inevitably be passed by the Congress. Indeed, in 1949, the American Medical Association, on the one hand, and a group of industrialists, on the other, had established nucleii of fund-raising organizations.

The debates and hearings on the Congressional Bills, and the fact that they came close to passage at the time, spurred the efforts of these two groups, and shortly their activities were closely coordinated —the Foundation limiting its appeal to national, state, and local medical societies and to individual physicians; the Fund directing its efforts in the area of business and industry through sponsoring committees organized in metropolitan areas over the nation. Periodically the American Medical Education Foundation transfers its proceeds to the National Fund for Medical Education for distribution to the medical schools on a formula agreed upon by both groups.

Over the four-year period, the Medical College of Virginia has received $87,034 from the Fund, and the University of Virginia, $85,229. The difference principally reflects a small factor in the formula for proration to size of student body.

Most emphatically, the state schools have found

this annual contribution as life-saving and life-giving as it has been to the private institutions. The reasons for this are many. Thirteen of the twenty medical schools in the South (in Virginia, North and South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Arkansas, Tennessee, and Kentucky) are state-supported today. Seven out of ten students graduating this year from these twenty southern schools will have received at least seventy-five per cent of the cost of their education from tax funds!

State budgets are not notably more generous to medical education than to general education, road construction, state police, agricultural commissions, or any of the worthy demands for public service. Yet it is self-evident, *for example,* that pathology professorships salary-wise must be correlated more *in the direction* of the opportunities for pathologists in practice or in hospital appointments than in the direction of professorial appointments on a salary scale throughout the state system—if we are to maintain a department of outstanding teachers and investigators. Augmentation of state salaries is the only possible solution.

The biennial legislative system imposes upon medical education—a field of dramatic growth and unpredictable opportunities—the necessity of designing during the summer of 1955 the budget for the school of medicine throughout the period of July 1, 1956, to June 30, 1958! Without outside funds, we are caught in a vise for two years!

Both of the medical schools of Virginia have benfited immeasurably from the American Medical Education Foundation and the National Fund for Medical Education. These funds deserve your support, if you are confident in our use of their annual contribution. A full picture can be presented to you in detail if you care to visit us and study the record.

JOHN B. TRUSLOW, M.D.

Editor's Note: DR. TRUSLOW *is Dean of Medicine, Medical College of Virginia.*

Weather and Well-Being.

Blaming the weather for "blue" moods and bad colds is not at all unscientific. The weather was blamed for the common cold as long as 2,000 years ago and scientific investigation has shown that Hippocrates was right. In fact, weather changes are reflected in all of the body's processes, and can have an effect on emotions, colds, asthma, heart disease, and even suicide. The weather can often be "the straw that breaks the camel's back," Dr. Fabricant said in the January Today's Health magazine, published by the American Medical Association.

There's an explanation for it. Tests have shown that "every change in weather involves a physiological adjustment in everyone." For instance, colds increase when temperature drops because the membranes of the nose and throat become altered and fall easy victim to invading germs. In fact, scientists have said that the form of the nose depends on the climate—the colder the climate, the narrower the nose. Eskimos have narrower noses than Africans.

At least somebody is trying to "do something about the weather." Taming the weather has become a foremost interest of many engineers, architects, meteorologists, and physicians. Some planners are convinced that buildings could be placed to serve as windbreaks, streets laid out to avoid wind channels, and houses built to reject rather than absorb heat. One way to prevent the shock of going from an air-conditioned room into the heat, or from a heated room into the cold, is to have a closer adjustment between the two atmospheres.

"Some physicians believe that a number of diseases will respond to controlled weather and climatic conditions." "Though more than a beginning has been made toward deflating the common cold nuisance, it is reasonable to expect that in the future attention to controlled atmospheric conditions will play a role in ameliorating colds."

Woman's Auxiliary . . . .

President ..... Mrs. Maynard Emlaw, Richmond
President-Elect ..... Mrs. Mervin W. Glover, Arlington
Recording Secretary.. Mrs. J. W. Carney, Newport News
Corresponding Secretary
Mrs. Levi W. Hulley, Jr., Richmond
Treasurer..... Mrs. William C. Barr, Richmond
Publication Chairman Mrs. Wm. S. Grizzard, Petersburg

Wise.

The Auxiliary to the Wise County Medical Society met at the Colonial Hotel in Wise on April 15th, with Mrs. C. H. Henderson, president, presiding. Mrs. Maynard Emlaw and Mrs. Mervin Glover, president and president-elect of the State Auxiliary, were guests. Hostesses for the meeting were Mrs. R. N. Shelley and Mrs. H. H. Howze.

Reports of various committees were given and volunteers signed up for the Hospital Garden Club to supply patients with reading matter. A resolution was passed to support the Cancer Society drive for funds.

Mrs. Emlaw outlined the history of the auxiliary and stressed the importance of the American Medical Education Foundation, suggesting ways and means for raising funds.

I. V. Bene (Mrs. E. Bene)
Chairman of Publications

Danville-Pittsylvania.

This Auxiliary held a luncheon meeting at Memorial Hospital on April 21st, with the president. Mrs. G. V. Thompson, presiding. Mrs. Maynard Emlaw, state president, was guest speaker and gave a most interesting talk on Public Relations as it affects the doctor's wife.

Ida H. Hall (Mrs. Snowden C. Hall, Jr.)

Richmond.

The Auxiliary to the Richmond Academy of Medicine held its annual Public Relations luncheon April 15th. Presidents of various women's organizations throughout the city were guests. Dr. Carrington Williams, President of The Medical Society of Virginia, was guest speaker. Mrs. William P. Morrissette was chairman of the luncheon program.

Dr. and Mrs. Langdon Moss are the parents of a new baby son. Barbara is one of our active members.

Anne R. Snead (Mrs. George H. Snead)
Publicity Chairman

Alexandria.

The year of 1955 started off as a busy one for the Auxiliary to the Alexandria Medical Society. A buffet dinner was held in January at the home of Dr. and Mrs. Lewis E. Mangus. Each doctor's wife brought her favorite dish and a group of better cooks will not be found anywhere. Seventy-eight persons enjoyed an evening of food and fun.

At the luncheon meeting in February, plans were made for sponsoring one night at the Arena Stage in Washington. The Auxiliary took over the entire theatre on March 3rd, sold every seat and made a profit of $325.00. This money will go into a fund to purchase a call board for the Alexandria Hospital.

Doctor's Day was observed on April 3rd and the auxiliary held a reception in honor of Dr. H. A. Latane who was chosen Virginia General Practitioner of the year.

Martha M. Weaver (Mrs. Wm. J. Weaver, Jr.)

Petersburg.

At the meeting of this Auxiliary on April 26th, the Reverend Mr. Sidney C. Swann, Jr., spoke on the progress in the Southside Mental Health program.

New officers were elected as follows: President, Mrs. Kirby Hart; president-elect, Mrs. Norman F. Wyatt; vice-president, Mrs. James H. Powell; recording secretary, Mrs. Walter J. Brennan; corresponding secretary, Mrs. William S. Sloan; treasurer, Mrs. Harvey W. Goode, Jr.; parliamentarian, Mrs. Herman W. Farber; historian, Mrs. Herbert Jones; and directors, Mrs. J. H. McCormick, Jr., and Mrs. William Grossmann.

Dr. and Mrs. Francis R. Payne, Jr., announce the birth of a daughter, Elizabeth Kelly, on April 28th.

Dr. and Mrs. Milton Ende, Dr. and Mrs. Joseph Whittle, Dr. and Mrs. Mark Holt, Jr., attended the American College of Physicians meeting in Philadelphia April 24-29th.

Dorothy Uzzmann (Mrs. John)

Northampton-Accomac.

A delightful evening party, honoring the doctors of Northampton and Accomac, was given on March 30th at Windingdale, the lovely home of the late Dr. S. S. Kellam at Belle Haven. The house was beautifully decorated with camellias and the table arranged with yellow and white tulips, snapdragons and jonquils. In honor of Doctor's Day, each doctor was presented with a red carnation upon his arrival.

The Auxiliary held its Spring meeting at the

home of the President, Mrs. John R. Mapp, in Nassawadox on April 12th. Twenty-one members attended and the guest of honor was Mrs. Maynard R. Emlaw, state president.

Following a luncheon and the business meeting, Mrs. Emlaw told of her recent trip to Europe where she visited in the home of a Belgian doctor and his wife. She then outlined the duties of a doctor's wife, her part in the practice of his profession, that she be accurately informed in all matters pertaining to his business, and the importance of her work in the home, church and community.

The Auxiliary will be guests of Mrs. W. C. Henderson and Mrs. W. T. Green, Jr., at Mrs. Henderson's Cottage at Wilkins Beach at the July meeting.

CATHERINE R. TROWER (MRS. E. HOLLAND)

Book Announcements . . . .

The Scourge of the Swastika. A Short History of Nazi War Crimes. By LORD RUSSELL OF LIVERPOOL, C.B.E., M.C. Philosophical Library, New York. 1954. xii-259 pages. With 16 pages of halftone illustrations. Cloth. Price $4.50.

In contrast to some of the more technical medical and legal reports of the Nazi war crimes, this book is said to be written for the ordinary reader who may not have access to the technical or official reports.

Based upon documents and evidence presented at various war crime trials, and statements made by eye-witnesses of war crimes to war-crime investigation commissions, the author relates the unprecedented treatment of the inhabitants of invaded territories, prisoners of war and other "criminals" in accord with the Nazi concept of total war.

In the first chapter the author describes the origin and establishment of Hitler's "instruments of tyranny"—the organizations such as the SS, SD and Gestapo which carried out the desires of Hitler in his mad scheme to rid the earth of all but the "Master Race".

The remaining six chapters discuss life and death in concentration camps, slave labor camps, prisoner-of-war camps and on the high seas.

The book appears to be skillfully documented by excerpts from official orders and edicts of the German army high command, eye-witness accounts and portions of the trial records of the accused.

There are 24 photographs showing the atrocities being committed, some of the results and some of the slaughter camps with their personnel. There also are 4 sketches made at Ravensbruck by an inmate who survived.

The value of the book will depend on the individual readers interest. It presents nothing new about the subject nor is it as detailed as other reports which are available. However, for those who have not previously read of this aspect of the German crimes against humanity the volume adequately describes them in most of their horrible details.

HAROLD L. BEDDOE, M.D.

Review of Medical Microbiology. By ERNEST JAWETZ, Ph.D., M.D., Professor of Bacteriology and Lecturer in Medicine and Pediatrics, University of California; JOSEPH L. MELNICK, Ph.D., Professor of Epidemiology, Yale University School of Medicine; and EDWARD A. ADELBERG, Ph.D., Associate Professor of Bacteriology, University of California. Lange Medical Publishers, Los Altos, California. 1954. 360 pages. Illustrated. Price $4.50.

As stated in the preface, the authors' chief intent has been to prepare a brief, accurate, up-to-date presentation of medical microbiology. The review is directed primarily at the medical student, house officer and practicing physician. Details of technic and procedures as well as certain materials of controversial nature have been excluded.

The book is divided into 35 chapters, each written in the form of a well outlined lecture. Approximately one-third of the book is devoted to general bacteriology, antibacterial agents and chemotherapy. Another third of the contents is given to viruses and the balance to medical bacteriology, including a chapter on mycology.

The ninety-two illustrations are all in black and white and include many very good drawings. Two complete tabular outlines on viral diseases in animals and laboratory diagnosis of viral diseases are included.

References to literature are omitted in the body of the text and the bibliography consists of the mere listing of 16 textbooks and 7 journals.

The book is recommended as an accurate and well written review.

H. T. KNIGHTON

President's Message . . . .

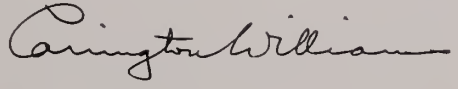
Medical Education for National Defense

ONE OF THE obligations of the young medical graduate is a period of service in the Armed Forces of the United States. In order to discharge this obligation to the maximum benefit of all concerned, it is essential that he be thoroughly familiar with the basic principles of military medicine and surgery and the medical problems of civil defense. In order to accomplish this, the Medical Education for National Defense Program (MEND) has been inaugurated in certain medical schools in the country with the Medical College of Virginia as one of the participating schools. Its purpose is to teach the medical student the principles of military and civil disaster medicine during medical school.

Following the inauguration of the MEND Program in 1951, five medical schools, i.e., University of Buffalo, University of California, Cornell University, University of Illinois, and Vanderbilt University, were selected to carry out pilot programs. After achieving outstanding success in these schools, the program has since been enlarged to fifteen medical schools to gain further experience in its application.

At the Medical College of Virginia, the knowledge and experience gained by the military is being integrated into already existing medical school courses, rather than as a separate and distinct series of lectures and demonstrations. It is believed that this approach offers considerable advantage to both student and faculty, since course material now taught can be compared and contrasted to military medical principles to the advantage of both subjects. For example, a comparison between the management of civilian wounds and military wounds enhances the student's understanding of both. Such teaching material is integrated into existing courses without added curricular hours. The program begins in the first year and continues throughout the entire medical school course and all departments participate. The use of guest lecturers of broad experience and such visual aids as movies made under battle conditions assist greatly in achieving the teaching objectives.

It is hoped that this program will better equip the physicians to meet the problems facing him in the Armed Services, as well as in times of civil disaster, and result in improved patient treatment.



President

Editorial....

The Surgery of Segmental Arterial Occlusion Due to Arteriosclerosis

THE present interest in segmental arterial occlusion or thrombosis is evidenced by the large number of articles concerned with this subject which have appeared in in our leading surgical journals recently.

Advancement in this field has been made possible through the development of the radiologic techniques of arteriography and aortography. Although many important contributions in the field of vascular surgery antedated 1947 it was in this year that Dos Santos introduced the technique of thromboendarterectomy, a procedure which removes the organized thrombus together with the arteriosclerotic intima and half of the media as a single sequestrated core. In 1948 Gross described a technique of preserving homologous arterial grafts and by this means was able to apply them in the treatment of coarctation of the aorta. In 1949 Kunlin described the successful replacement of obstructed arterial segments by autogenous vein grafts. Further clinical progress in vascular reconstruction during the past five years has been remarkably rapid.

Whereas occasional cases of segmental arterial occlusion result from trauma, inflammation or the late effects of embolus, the vast majority represent a relatively localized form of arteriosclerosis of the peripheral vessels. The usual sequence of pathologic events may be briefly described as sclerosis and thickening of the intima of the major peripheral arteries with plaque formation and stenosis of the lumen, with secondary thrombosis terminating in total occlusion, and with extension of this obliteration to the nearest major collateral channels. The clinical picture varies depending on the level and extent of segmental occlusion.

If the cardinal points of segmental occlusion are kept in mind, the clinical picture is not difficult to recognize or suspect. Confirmation requires arteriographic studies. (1) Claudication occurs on minimal exercise. The pain disappears almost immediately on rest. (2) Serious ischemic changes in the foot are usually not evident. There may be some coolness of the foot. Pallor is observed on elevation and reactive hyperemia on dependency with delay in venous filling, but ulceration and gangrene are generally absent. (3) Rest pain is absent. (4) Certain major arterial pulses are impalpable, depending on the level of occlusion. In the case of an aortoiliac occlusion, a feeble femoral pulse may be present. (5) Oscillometric readings are absent or markedly decreased. Oscillometer studies will aid in determining the exact level of occlusion. Some deflection may be obtained depending on the strength of the collateral circulation. (6) Confirmation of the site and extent of arterial occlusion is obtained by aortography and arteriography.

This clinical picture suggests the presence of a sufficiently strong collateral circulation about a limited segment of arterial obstruction with patency of the major arterial pathway below. Blood flow is adequate to meet the needs of the tissue at rest but insufficient to meet the demands of muscular activity.

Rarely when the obliterative process has occurred more rapidly than collateral circulation could develop or the obstruction has extended sufficiently to involve major collateral branches serious ischemic changes may be found.

It is important also to appreciate the clinical picture of arterial stenosis of major degree since the correct diagnosis here is less evident. Here also there is claudication and absence of ischemic changes. The diagnosis may not be suspected because arterial pulses are actually present although somewhat soft. The pulses may disappear on

exercise as blood is shunted into the muscular bed. Oscillometric readings are diminished. A bruit can be heard over the vessel distal to the stenosis. Recognition is important since surgery is easier when the obstruction is localized.

When the superficial femoral artery or popliteal artery is involved calf claudication predominates. When the common femoral or external iliac is obstructed with diminished flow through the deep femoral artery symptoms of severe fatigue in the posterior thigh on exercise are added to the picture. Obstruction of the common iliac with diminished flow into the internal iliac bed may bring the patient into the orthopedic or neurosurgical clinic complaining of claudication pain in the hip, back or gluteal regions. The correct diagnosis may be overlooked, especially if peripheral pulses are present as in iliac stenosis. The clinical picture may superficially resemble arthritis of the hip, sacroiliac pain, bursitis, or ruptured intervertebral disc. When both common iliacs or the terminal aorta are obstructed, a condition known as Leriche's syndrome, the above symptomatology is bilateral and in addition impotence and perineal paresthesias are usually present. Reduction of blood supply to the sacral region of the spinal cord may cause various paresthesias in the lower extermities, often only after exercise. Slow extension of the thrombotic process proximally to involve the lumbar arteries may diminish collateral circulation with resulting ulcerative changes in the extremity and gangrene. Further progression to involve the orifices of the renal arteries may lead to a Goldblatt kidney, hypertension and ultimately death.

The possibility of relieving various arterial obstructions by surgical means stresses the need for a closer look at all cases of vascular insufficiency of the lower extremities. A large percentage of patients presenting with symptoms of vascular insufficiency will deserve study by aortography or arteriography, and of these a significant number will be found to have a segmental occlusion suitable for surgical resection. A complete study from aortic bifurcation to popliteal bifurcation is desirable to evaluate multiple areas of obstruction and diffuse obliterative arterial disease.

Of the two available techniques, thromboendarterectomy and and vascular grafting, the latter has the widest applicability. The late results of thromboendarterectomy in small vessels, such as the femoral, have not been satisfactory because of rethrombosis. With the exception of a few dissenting voices it is generally accepted now that this procedure should be limited to short segments, chiefly in the large arteries. However, thromboendarterectomy is frequently employed in conjunction with vascular grafting at either end of the resection to provide an adequate cuff for the anastomosis without endangering major adjacent collateral branches.

On the other hand, the field of vascular grafting continues to enlarge. Whereas certain surgeons employ autogenous or homologous vein grafts in the thigh with satisfaction, others contend that the results are better with homologous arterial grafts. In the iliac and aortic regions, homologous vein grafts are unsatisfactory and autogenous vein grafts impractical because of the size of the vessels involved. Homologous arterial grafts or plastic tube replacement have been employed in the aortoiliac region with equal success. Because of the difficulty of obtaining an adequate supply of homologous arteries plastic prostheses of orlon, nylon or dacron have become increasingly popular. At the present time the plastic substitutes are somewhat more difficult to suture, but they offer the advantages of ready availability and easy adaptability to size. They are, however, not suitable for small vessels. Improvements are undoubtedly forthcoming, possibly in the form of knitted, seamless tubes.

A consideration of the factors causing failure and rethrombosis in vascular grafting is more pertinent for small arteries such as the femoral and popliteal. Good principles of vascular surgery may be violated in the aortoiliac region without necessarily compromising the functional result.

Failure may be related to any one of the following ten factors. (1) A distal block, either diffuse arterial disease, a second segmental obstruction, or venous thrombosis, impeding blood flow through the graft and thus predisposing to thrombosis. (2) Failure is more likely to occur in a small artery. (3) In the small artery the length of graft required as replacement undoubtedly plays a role. (4) The distal anastomosis is critical and heaping up of the diseased and thickened distal intima may allow intramural dissection and occlusion. (5) Torsion and kinking are technical considerations which apply especially to vein grafts and plastic grafts respectively. (6) Discrepancy in lumen size is dangerous since it leads to turbulence and progressive thrombus deposition. (7) Hypotension during or shortly after the operative procedure may critically reduce blood flow. (8) Heparin is a two-edged sword and postoperative hematoma may compress the graft. However, heparinization during the arterial occlusion is indicated to reduce the threat of clotting in the small peripheral arteries. (9) The graft itself may be defective. (10) Lastly, infection is certainly a most important factor. It usually leads to breakdown of vascular anastomoses often with catastrophe.

Arteriosclerosis in general is a systemic disease and eradication of the regions most severely affected will not of course alter the inexorable although slow progress of the disease. Surgery is to be avoided in the face of serious coronary or renal involvement. However, alleviation of serious symptoms of claudication, the prevention of life-endangering complications in some cases and the rehabilitation of the individual are most certainly worthwhile goals.

Society Proceedings . . . .

The Giles County Medical Society

And the Staff of the Giles Memorial Hospital will hold a combined meeting, June 2nd, at 7:00 P. M., at Mountain Lake Hotel, Mountain Lake. Guests from surrounding communities are being invited.

The program is as follows: Hiatus Hernia, with a motion picture, by Dr. Brian Blades, Professor of Surgery, George Washington University School of Medicine, Washington, D. C.; and Polyps of the Gastrointestinal Tract by Dr. Herbert Giffin, Associate Professor of Pediatrics, Georgetown University School of Medicine, Washington, D. C.

Dr. L. E. Dunman is president of this Society and Dr. Lyle E. Delap secretary.

The Northampton County Medical Society

Met on April 21st at the Eastville Inn. Dr. Geoffrey Mann, Chief Medical Examiner of the State of Virginia, spoke and showed slides depicting some of the work of his office.

The Society changed its Constitution to allow membership of qualified Negro practitioners of medicine.

Dr. John R. Freeman, Cape Charles, is president of this Society, and Dr. Raymond Brown, Eastville, secretary.

Princess Anne County Medical Society.

At a recent meeting of this Society, Dr. Kathryn D. Hill was elected President and Dr. James W. Todd re-elected secretary-treasurer. Both are of Virginia Beach.

Alexandria Medical Society.

At its regular meeting on April 14th, the following officers were elected: President, Dr. Richard E. Palmer; president-elect, Dr. Haskins H. Ferrell, Jr.; vice-president, Dr. Eugene R. Grether; secretary, Dr. Thomas F. McGough; treasurer, Dr. James D. Mills, Jr.; and members of the Executive Committee, Drs. Christopher J. Murphy, Jr., and F. Preston Titus. Dr. John C. Watson continues on this committee for another year.

News . . . .

Calendar of Coming Events

American Proctologic Society—Hotel Statler, New York City, June 1-4.
American College of Chest Physicians—Ambassador Hotel, Atlantic City, New Jersey, June 6-10
American Medical Association—Atlantic City, New Jersey, June 6-10.
Neuropsychiatric Society of Virginia—Radford, Virginia, June 22.
American Congress of Physical Medicine and Rehabilitation—Hotel Statler, Detroit, Michigan, August 28-September 2.
The Medical Society of Virginia—Hotel Jefferson, Richmond, Virginia, October 16-19.
Southern Medical Association—Houston, Texas, November 14-17.
American Association of Blood Banks—Palmer House, Chicago, Illinois, November 19-21.
Virginia Society of Ophthalmology and Otolaryngology—Medical College of Virginia, Richmond, Virginia, November 29-December 2.

Memorial to Agnes V. Edwards

To the Members of
The Medical Society of Virginia:

On visiting my sister's grave in Riverview Cemetery recently, my gaze became fixed upon a granite marked with the following inscription:

"Agnes Vanculen Edward
August 28, 1877
May 22, 1954
Erected by
The Medical Society of Virginia".

Thus in silent esteem has the Medical Profession of Virginia honored the memory of a soul who loved her work and was faithful to every duty. Her memory is very dear to me, and I know she would be grateful, as I am, for this expression of your confidence and kindly thought of her.

In the May 8, 1914, issue of the Virginia Medical Semi-Monthly, I re-produced from the Richmond Time-Dispatch of May 5, 1914, a notice and picture of a handsome granite monument that was erected over the grave of my father, Dr. Landon B. Edwards, four years after his death by the Physicians of Virginia. I may now well repeat in Agnes' behalf—

"To live in hearts we leave behind,
Is not to die."

Charles M. Edwards, M.D.

Richmond, Virginia
April 21, 1955

Dr. Cockrell Honored.

Dr. Loren E. Cockrell, Reedville, was guest of honor at a program of tribute and a reception held by the members of Bethany Methodist Church in observance of his eighty-fifth birthday and sixty years of practice. The Church overflowed with people from the Northern Neck and many other sections of the State. Dr. Cockrell was presented with a silver bowl inscribed "Presented to Loren E. Cockrell, M. D., by his friends in grateful recognition of 60 years' unselfish and devoted service in the field of medicine, and a lifetime of abiding interest in all matters, moral, civic and educational in the communities he has so faithfully served."

To Head New Public Health Organization.

Dr. Charles L. Outland, Richmond, was named president-elect of the new Virginia Public Health Association at its inaugural meeting held in Roanoke on May 10th.

Dr. James M. Suter, Abingdon, and Dr. Linwood Farley, Williamsburg were elected as executive comitteemen.

Dr. C. G. Finney,

Saltville, has been elected president of the newly formed Mountaineer Sportsmen's Association. The organization embraces the counties of Bland, Smyth, Tazewell and Washington. Its objective is to prevent the waste of natural resources and fostering of wildlife.

Boston Clinical Meeting.

All persons who desire a place on the lecture program at the Boston Clinical Meeting of the American Medical Association are urged to communicate immediately with the Chairman of the Program Committee—Theodore L. Badger, M.D., c/o Massachusetts Medical Society, 22 The Fenway, Boston 15.

Applications for space in the Scientific Exhibit are now available and will be sent on request. Exhibits will supplement the lectures as far as possible, and should portray subjects of a broad general interest. Requests for applications should be sent to the Secretary, Council on Scientific Assembly, American Medical Association, 535 N. Dearborn St., Chicago 10, Illinois.

Dr. R. Finley Gayle, Jr.,

Richmond, was installed as President of the American Psychiatric Association at its annual meeting in Atlantic City, May 9-13.

Dr. Girard V. Thompson,

Chatham, has been elected a member of the Pittsylvania County School Board.

Dr. T. E. Stanley,

Richmond, will deliver the commencement address at Beaverdam High School on June 2nd.

Dr. Ennion S. Williams,

Has been re-elected president of the Richmond Tuberculosis Association.

Dr. Fleshman Moves to New Home.

Dr. and Mrs. D. L. Fleshman, who have made their home in Bassett for the past twenty-eight years, have moved to Pence Springs, W. Va. Dr. Fleshman has been in bad health for several months and has been ordered to have complete rest for some time.

Dr. Frank R. Klune,

Recently of Lorton, announces the re-location of his office in the New Bank Building, Woodbridge.

The Gill Memorial Eye, Ear, Nose and Throat Hospital,

Roanoke, has completed its 28th Annual Spring Congress in Opthalmology and Otolaryngology. There was a total attendance of 350 doctors and their wives from all over the United States and Canada. The Congress next year will be held April 2-7.

Tennessee Valley Medical Assembly,

Sponsored by the Chattanooga and Hamilton County Medical Socieyt, will be held in Chattanooga, October 3 and 4, 1955. Outstanding speakers from all sections if the country will be on the program. Attendance at the Assembly provides acceptable medical study requirements for continued membership in the American Academy of General Practice.

Full information may be obtained by addressing the Assembly, 109 Medical Arts Building, Chattanooga 2, Tenn.

Wanted.

Psychiatric residents for approved one to three year training program in affiliation with two medical schools. Reply: Manager, VA Hospital, Roanoke 17, Va. (*Adv.*)

Practice Available.

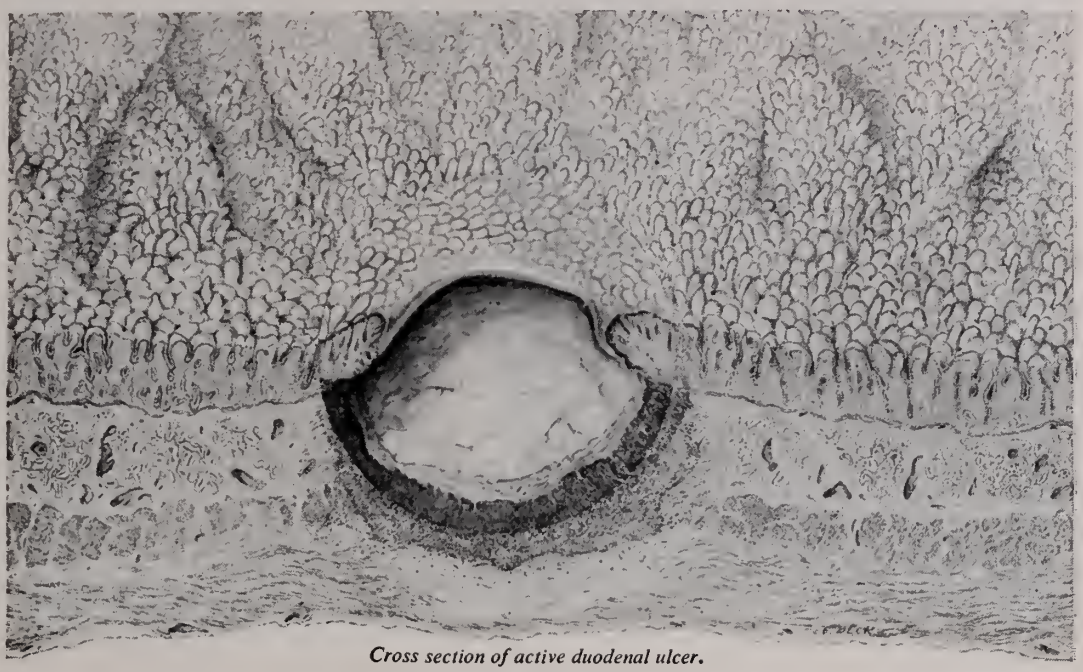
Well established practice in Falls Church, about 6 miles from the District of Columbia and 3 miles from the nearest hospital. The office, located in a busy shopping center in the heart of a growing community, consists of 5 rooms and bath. It is attractively furnished, air conditioned and the rent is very reasonable. Gross income is over $25,000 yearly. Terms can be arranged. For further information, contact Dr. Jack R. Woodside, 1057 West Broad Street, Falls Church, Virginia. (*Adv.*)

Obituaries . . . .

Dr. Wilbur Morrison Bowman,

City Health Officer of Petersburg, died suddenly May 6th, having been in ill health for the past year. He was fifty-six years of age and received his medical degree from the University of Virginia in 1924. Dr. Bowman had practiced in Petersburg since his graduation except for the time of his service as Major with the Army Medical Corps during World War II. He had been City Health Officer since 1947. Dr. Bowman had been a member of The Medical Society of Virginia for thirty years.

His wife, two sisters and two brothers survive him.



Cross section of active duodenal ulcer.

Dramatic Remission of Ulcer Pain

Pain of ulcer is associated with hypermotility; the pain is relieved when abnormal motility is controlled by Pro-Banthīne.

"In studying[1] the mechanism of ulcer pain, it is obvious that there are at least two factors which must be considered: namely, hydrochloric acid and motility.

". . . our studies indicate that ulcer pain in the uncomplicated case is invariably associated with abnormal motility. . . .

"Prompt relief of ulcer pain by ganglionic blocking agents . . . coincided exactly with cessation of abnormal motility and relaxation of the stomach."

Pro-Banthine Bromide (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is a new, improved, well tolerated anticholinergic agent which consistently reduces hypermotility of the stomach and intestinal tract. In peptic ulcer therapy[2] Pro-Banthine has brought about dramatic remissions, based on roentgenologic evidence. Concurrently there is a reduction of pain, or in many instances, the pain and discomfort disappear early in the program of therapy.

One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

"This ulcer crater was unusually large, yet on 30 mg. doses of Pro-Banthine [q.i.d.] his symptoms were relieved in 48 hours and a most dramatic diminution in the size of the crater was evident within 12 days."

Pro-Banthine is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

---

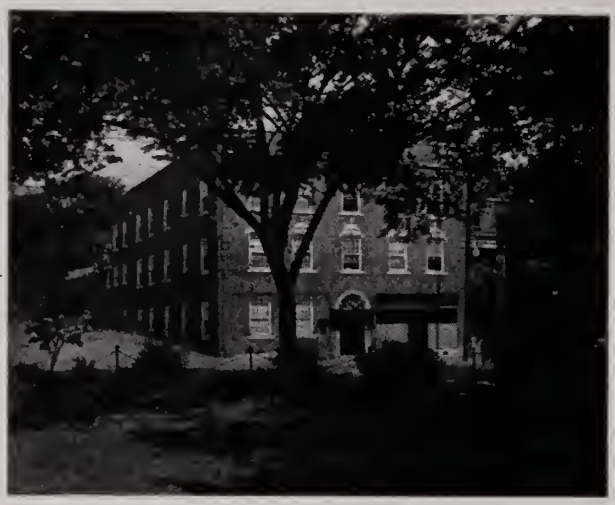
1. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

2. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

SEARLE

Gill Memorial Eye, Ear and Throat Hospital, Inc.

Roanoke, Virginia



STAFF

ELBYRNE G. GILL, M. D.
HOUSTON L. BELL, M. D.
THOMAS QUILTY, M. D.
DORIS L. JANES, B. S., O. D.
(Orthoptics and Contact Glasses)
S. H. HOLLAND, M. D.
ROBERT B. JONES, JR., M. D.

A Modern, Fireproof Hospital, Specially Designed and Equipped for the Medical and Surgical Care of Ophthalmology, Otolaryngology, Facio-Maxillary Surgery, Bronchoscopy and Esophagoscopy.

Complete Laboratory and X-Ray Equipment.

Physicians and Graduate Nurses in Constant Attendance.

The Hospital offers a residentship of three years to a graduate of an approved medical school, who has had an internship of at least one year in an approved hospital.

For further information, address

BUSINESS MANAGER, BOX 1789, ROANOKE, VIRGINIA

RIVERSIDE HOSPITAL, Newport News, Va.



A General Hospital (265 beds) with Departments in Medicine, Surgery, Obstetrics, Pathology, Radiology, Pediatrics and Nursing. The Hospital is accredited by the Council on Medical Education of the American Medical Association for training first year interns, residencies in the surgical specialties for one and two years, general practices two years full approval, internal medicine, and obstetrics and gynecology, and the School of Nursing is accredited by the Virginia State Board of Nurse Examiners.

DAVID E. WATSON,
Administrator

MISS MARY LOUISE HABEL, R.N.,
Director, School of Nursing

ST. ELIZABETH'S HOSPITAL

RICHMOND 20, VIRGINIA

STAFF

Guy W. Horsley, M.D.---General Surgery and Gynecology
D. Coleman Booker, M.D.---General Surgery and Gynecology
Austin I. Dodson, M.D.---Urology
Austin I. Dodson, Jr., M.D.---Urology
J. Edward Hill, M.D.---Urology
Douglas G. Chapman, M.D.---Internal Medicine
Eimer S. Robertson, M.D.---Internal Medicine
T. E. Stanley, M.D.---Internal Medicine
Fred M. Hodges, M.D.---Roentgenology
L. O. Snead, M.D.---Roentgenology
Hunter B. Frischkorn, Jr., M.D.---Roentgenology
Helen Lorraine---Medical Illustration

ADMINISTRATION

William Scott---Business Manager

SCHOOL OF NURSING

The School of Nursing is affiliated with The Johns Hopkins Hospital School of Nursing for a three months' course each in Pediatrics and Obstetrics, and with the Tucker's Hospital in Richmond for a 12 weeks course in Psychiatry.

Address: Superintendent of Nurses

STUART CIRCLE HOSPITAL

413-21 Stuart Circle
RICHMOND, VIRGINIA

Medicine:
Manfred Call, III, M.D.
M. Morris Pinckney, M.D.
Alexander G. Brown, III, M.D.
John D. Call, M.D.
Wyndham B. Blanton, Jr., M.D.

Obstetrics and Gynecology:
Wm. Durwood Suggs, M.D.
Spotswood Robins, M.D.
Edwin B. Parkinson, M.D.

Orthopedics:
Beverley B. Clary, M.D.

Pediatrics:
Charles P. Mangum, M.D.
Edward G. Davis, Jr., M.D.

Ophthalmology, Otolaryngology:
W. L. Mason, M.D.

Pathology:
Regena Beck, M.D.

Anesthesiology
William B. Moncure, M.D.
Heth Owen, Jr., M.D.

Surgery:
A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr., M.D.

Urological Surgery:
Frank Pole, M.D.

Oral Surgery:
Guy R. Harrison, D.D.S.

Plastic Surgery:
Hunter S. Jackson, M.D.

Roentgenology and Radiology:
Fred M. Hodges, M.D.
L. O. Snead, M.D.
Hunter B. Frischkorn, Jr., M.D.
William C. Barr, M.D.

Physiotherapy:
Miss Etheleen Dalton

Director:
Charles C. Hough

Third Decade of Nursing

MODERN IN EQUIPMENT

MRS. PLYLER'S

KATE E. PLYLER (1876-1947)

PROMPTUS ET FIDELIS

OLD IN TRADITION

NURSING HOME

MARY INGRAM CLARK

CONVALESCENT — CHRONIC — AGED

- Equipped for oxygen and transfusions
- 30 special & general nurses
- 24-hour nursing care
- Centrally located
- 50-bed capacity
- Dietician
- Rates from $42.00 to $70.00 per week for room, board and general nursing care.





For further information write or call MRS. GENE CLARK REGIRER, Supt.

1613-15-17 Grove Avenue—Richmond, Virginia—Telephone 84-3221

RICHMOND EYE HOSPITAL
RICHMOND EAR, NOSE AND THROAT HOSPITAL

(COMBINED)

RICHMOND, VIRGINIA



A new non-profit Community Hospital specially constructed for the treatment of Eye, Ear, Nose and Throat Diseases, including Laryngeal Surgery, Bronchoscopy and Plastic Surgery of the Nose.

Professional care offered a limited number of charity patients.

ADDRESS: **JULIA WAGNER WATERS, R.N., *Administrator*** **408 North 12th Street**

RIVERSIDE CONVALESCENT HOME

Sophia & Fauquier Sts. **Fredericksburg, Virginia**



For convalescent, aged, chronically ill, and retired persons.

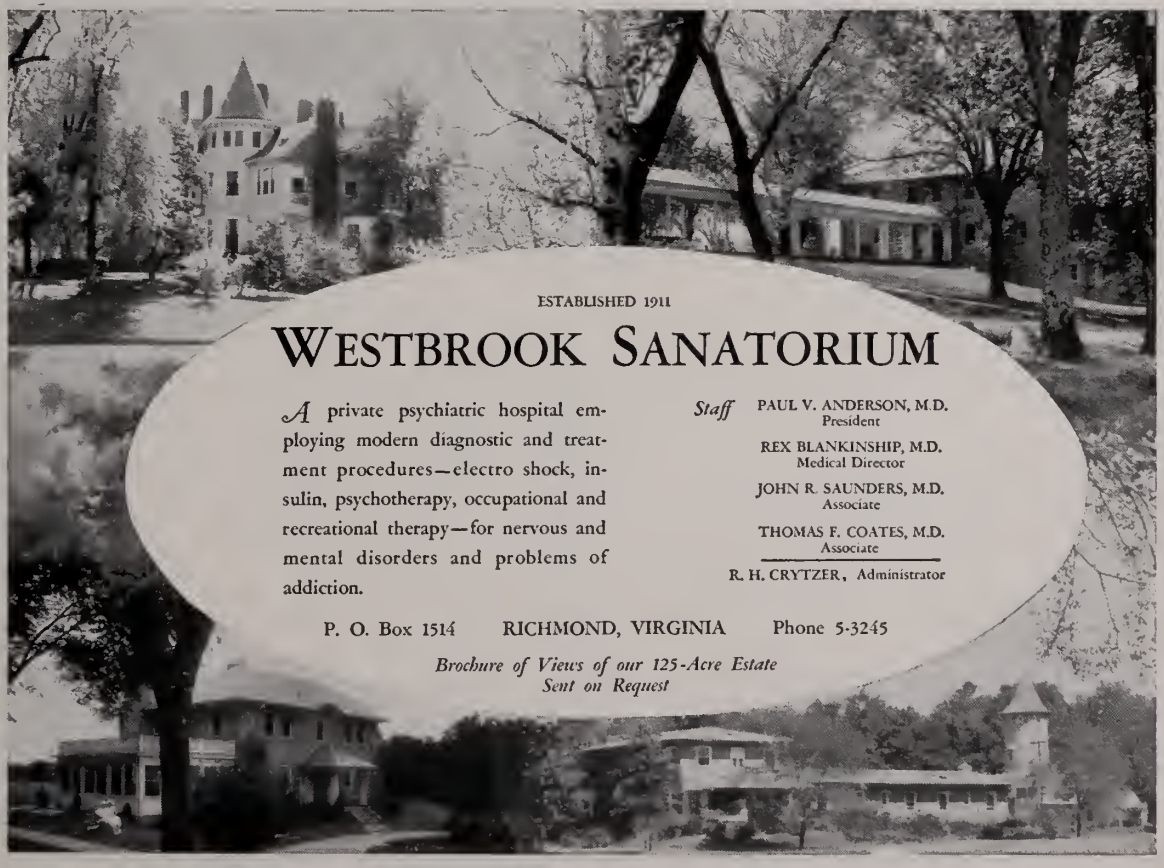
Centrally located in Historic Fredericksburg, on the beautiful Rappahannock, in the former Mary Washington Hospital Building. Completely redecorated and refurnished.

Eighty Bed Capacity

Medical Supervision

Inspection Invited

Rates:
$30.00 to $75.00 per week



ESTABLISHED 1911

WESTBROOK SANATORIUM

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

Staff
PAUL V. ANDERSON, M.D.
President
REX BLANKINSHIP, M.D.
Medical Director
JOHN R. SAUNDERS, M.D.
Associate
THOMAS F. COATES, M.D.
Associate
R. H. CRYTZER, Administrator

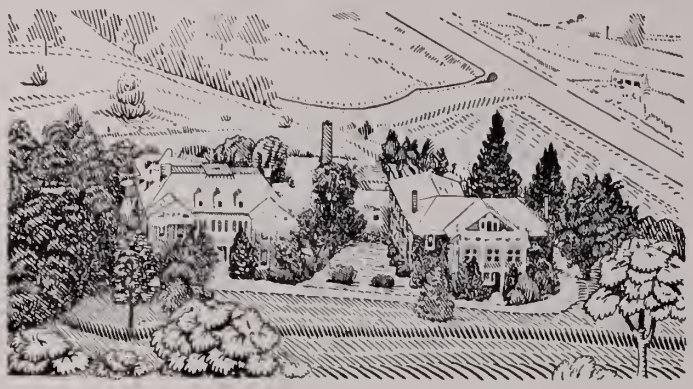
P. O. Box 1514 RICHMOND, VIRGINIA Phone 5-3245

Brochure of Views of our 125-Acre Estate
Sent on Request

SAINT ALBANS

A PRIVATE PSYCHIATRIC HOSPITAL

RADFORD, VIRGINIA



STAFF

James P. King, M. D., Director

James K. Morrow, M. D. Thomas E. Painter, M. D. Daniel D. Chiles, M. D.

James L. Chitwood, M. D., Medical Consultant

Affiliated Clinic Offering Psychiatric and Psychological Evaluation and Therapy:

BLUEFIELD MENTAL HEALTH CENTER

1400 Bland Street **Bluefield, W. Va.**

David M. Wayne, M. D., Director

TUCKER HOSPITAL Inc.

212 West Franklin Street,

Richmond, Virginia

A private hospital accepting for diagnosis and treatment organic neurological conditions, selected psychiatric and alcoholic cases, metabolic disturbances of an endocrine nature, individuals who are having difficulty with their personality adjustments, and children with behavior problems. Patients with general medical disorders admitted for treatment under our staff of visiting physicians.

Under the Professional Charge of

DR. HOWARD R. MASTERS, DR. JAMES ASA SHIELD

AND ASSOCIATES

Appalachian Hall • Asheville, North Carolina

Established 1916



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

Wm. Ray Griffin, Sr., M.D.
Diplomate in Psychiatry
Wm. Ray Griffin, Jr., M.D.

Mark A. Griffin, Sr., M.D.
Diplomate in Psychiatry
Mark A. Griffin, Jr., M.D.

For rates and further information write APPALACHIAN HALL, Asheville, N. C.

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

Medical College of Virginia

HOSPITAL DIVISION

RICHMOND, VIRGINIA

A health center using the latest methods of diagnosis and treatment of disease.

MEDICAL COLLEGE OF VIRGINIA HOSPITAL
OUT-PATIENT DEPARTMENT
SAINT PHILIP HOSPITAL
DOOLEY HOSPITAL

The patient's welfare is our primary interest.

C. P. CARDWELL, JR., *Director*

A Modern Hospital for the Treatment of Alcoholism Exclusively

- A private hospital offering scientific, institutional, medical, psychological, reflex, reduction and other methods for the rehabilitation of consent patients suffering from alcoholism.

- All equipment modern with facilities to take care of 50 patients both male and female.

- Under the direction of a competent licensed M. D. with five consultant physicians subject to call. Registered Nurses in charge 24 hours daily.



Approved and licensed by the Virginia State Hospital Board. Atop beautiful Mt. Regis, five miles West of Roanoke, on Highway 11, in the quiet serene mountains of Virginia, conducive to rest, comfort and recuperation. Doctors inspection invited. For information phone or write.

WHITE CROSS HOSPITAL

Five Miles West of Roanoke on Route No. 11.
Salem, Virginia — Phone Salem 287

WHITE CROSS HOSPITAL

Copyright 1948. H. N. Alford, Atlanta, Ga.

McGUIRE CLINIC

ST. LUKE'S HOSPITAL

RICHMOND, VIRGINIA

General Medicine

HUNTER H. McGUIRE, M.D.
MARGARET NOLTING, M.D.
JOHN P. LYNCH, M.D.
WM. H. HARRIS, JR., M.D.
JOHN B. CATLETT, M.D.
ROBERT W. BEDINGER, M.D.

Orthopedic Surgery

JAMES T. TUCKER, M.D.
BEVERLEY B. CLARY, M.D.
EARNEST B. CARPENTER, M.D.

Ophthalmology, Otolaryngology

FRANCIS H. LEE, M.D.

General Surgery

WEBSTER P. BARNES, M.D.
JOHN H. REED, JR., M.D.
JOHN ROBERT MASSIE, JR., M.D.
JOSEPH W. COXE III, M.D.

Dental Surgery

JOHN BELL WILLIAMS, D.D.S.

Urology

AUSTIN I. DODSON, M.D.
CHAS. M. NELSON, M.D.
AUSTIN I. DODSON, JR., M.D.

Pediatrics

HUBERT T. DOUGAN, M.D.

Obstetrics

W. HUGHES EVANS, M.D.
W. H. COX, M.D.
JAMES M. WHITFIELD, M.D.

Bronchoscopy

GEORGE AUSTIN WELCHONS, M.D.

Roentgenology

JESSE N. CLORE, JR., M.D.
STUART J. EISENBERG, M.D.

Pathology

J. H. SCHERER, M.D.

Treasurer: RICHARD J. JONES, BS., C.P.A.

RICHMOND'S FINEST + ONE OF VIRGINIA'S LARGEST

TERRACE HILL NURSING HOME, INC.

"Understanding Care"



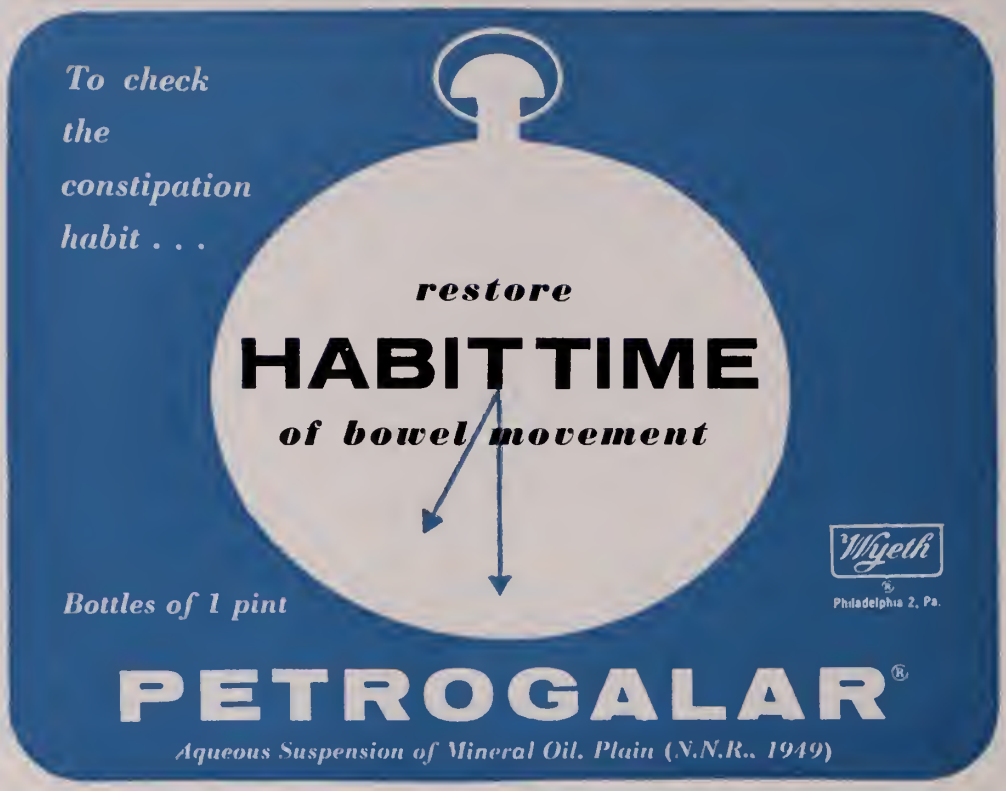
View Showing Part of 3½ Acres of Terrace Hill Nursing Home.

TERRACE HILL NURSING HOME is a privately managed nursing home specializing in 24 hour daily nursing care for elderly people, convalescent and chronic cases. Home-like atmosphere. Exclusive park-like grounds. Supervised diets. Nutritious food. Private and semi-private rooms with baths. Accommodations for 45 guests. Under supervision of a resident, registered nurse. Rates from $45.00 to $60.00 per week for room, board and general nursing care. Your inspection invited.

City, State and Nationally Approved and Registered

For Further Information or Reservation write to

DIRECTOR, Terrace Hill Nursing Home • 2112 Monteiro Ave. • Phone 3-3993 • Richmond 22, Va.



Complete
Printing and Binding Service

Commercial, Book and Job Work, Catalogues—Publications
Advertising Literature, Booklets—Broadsides
Office and Factory Forms
Loose-Leaf and Manifold Forms—Ledger Leaves and Loose-Leaf Binders
Paper Ruling
Complete Binding Equipment

Complete Service Under One Roof

Aequaint us with your requirements. We serve you efficiently and economically.

Dial 3-1881

WILLIAMS PRINTING CO.

11-13-15 North Fourteenth Street **RICHMOND, VIRGINIA**

STRESS FORTIFY

THE ACUTELY ILL PATIENT



Prompt institution of therapy with such well-tolerated and effective agents as Terramycin,®* Tetracyn®† or penicillin rapidly controls infections due to susceptible organisms. Other measures contributing to shorter illness and faster recovery include stress fortification of the patient with therapeutic amounts of the B-complex, C and K vitamins, recommended by the National Research Council for routine use during the stress of severe infection or injury.

*BRAND OF OXYTETRACYCLINE
†BRAND OF TETRACYCLINE

Pfizer

PFIZER LABORATORIES, Brooklyn 6, N. Y.
Division, Chas. Pfizer & Co., Inc.

Ideal practice requires periodic adaptation of the *individualized* formula to the growing infant





Karo Syrup . . . a carbohydrate of choice in "milk modification" for 3 generations

With Karo, milk and water in the universal prescription, the doctor can readily quantitate the best formula for each infant. Individual infant feeding assures early adaptation of the most satisfactory milk mixture. A successful infant formula thus *lays the foundation* for early introduction of semi-solid foods.

Karo is well tolerated, easily digested, gradually absorbed at spaced intervals and completely utilized. It is a balanced fluid mixture of maltose, dextrins and dextrose readily soluble in fluid whole or evaporated milk. *Precludes* fermentation and irritation. Produces no intestinal reactions. Is hypoallergenic. Bacteria-free Karo is safe for feeding prematures, newborns, and infants—well and sick.

Light and dark Karo are interchangeable in formulas; both yield 60 calories per tablespoon.

Behind each bottle three generations of world literature.

CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.

Upjohn

Rheumatoid arthritis, rheumatic fever, intractable asthma, allergies . . .

Cortef* *tablets*

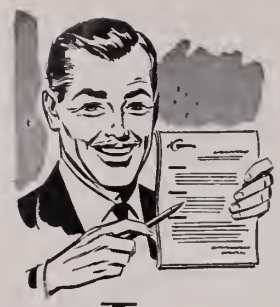
Supplied:

5 mg. tablets in bottles of 50
10 mg. tablets in bottles of 25, 100, 500
20 mg. tablets in bottles of 25, 100, 500

*REGISTERED TRADEMARK FOR THE UPJOHN BRAND OF HYDROCORTISONE (COMPOUND F)

The Upjohn Company, Kalamazoo, Michigan





READING TIME—1 MINUTE

A FEW FACTS FOR THE BUSY DOCTOR WHO WANTS THE

Latest Information About Filter Tip Cigarettes

Your patients are interested in cigarettes! From the large volume of writing on this subject, Brown & Williamson Tobacco Corp. would like to give you a few facts about *Viceroy*.

Only Viceroy gives you, your patients, and all cigarette smokers 20,000 Filter Traps in every filter tip. These filter traps, doctor, are composed of a pure white non-mineral cellulose acetate. They provide the maximum filtering efficiency possible without affecting the flow of smoke or the full flavor of Viceroy's quality tobaccos.

Smokers report Viceroys taste even better than cigarettes without filters.



King-Size Filter Tip

VICEROY

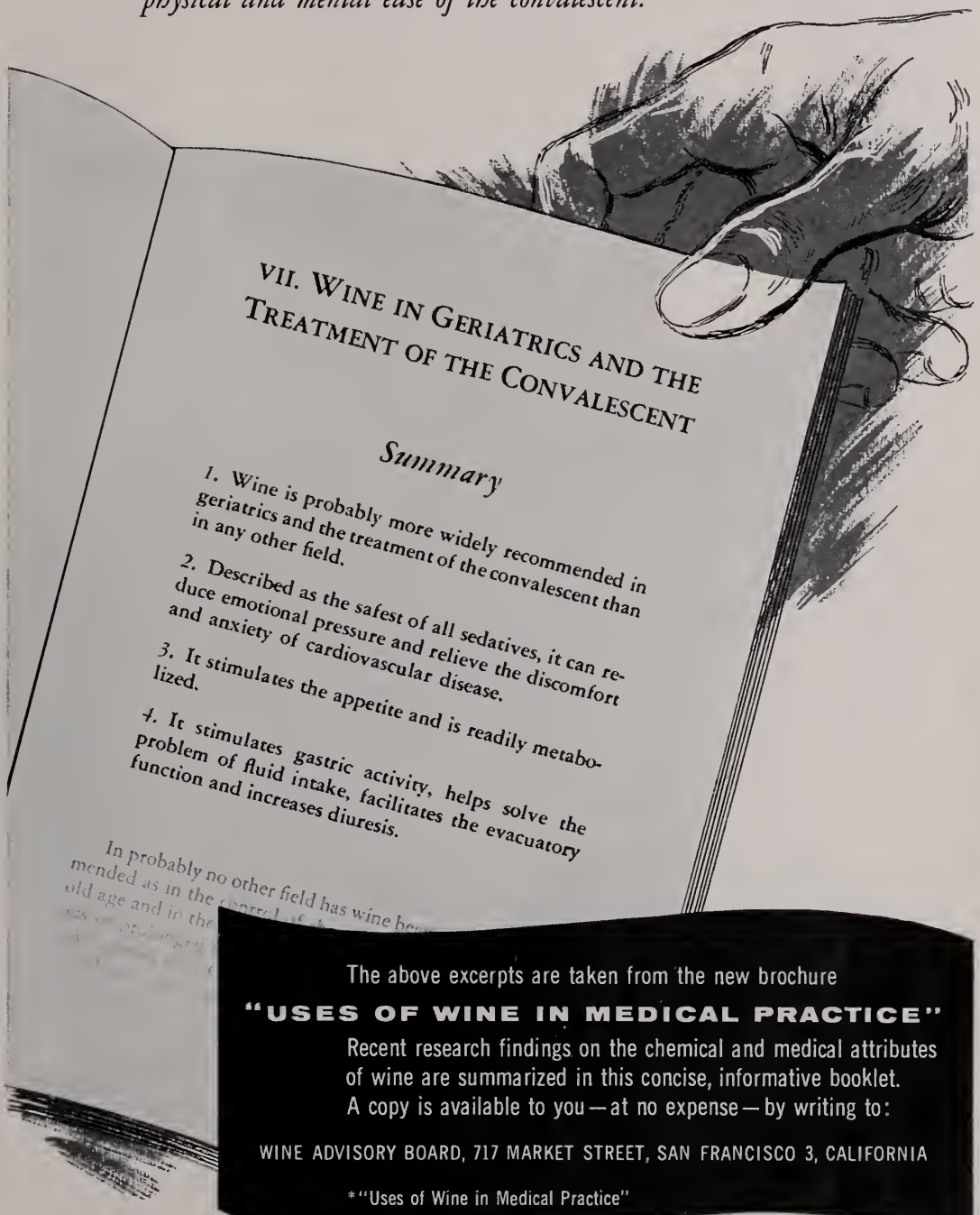
World's Most Popular Filter Tip Cigarette

Only a Penny or Two More Than Cigarettes Without Filters





"...prudent quantities of wine may add greatly to the pleasures of the table, to the *physical comfort and to the mental serenity of the aged,* as well as to the *generalized physical and mental ease of the convalescent.*"*



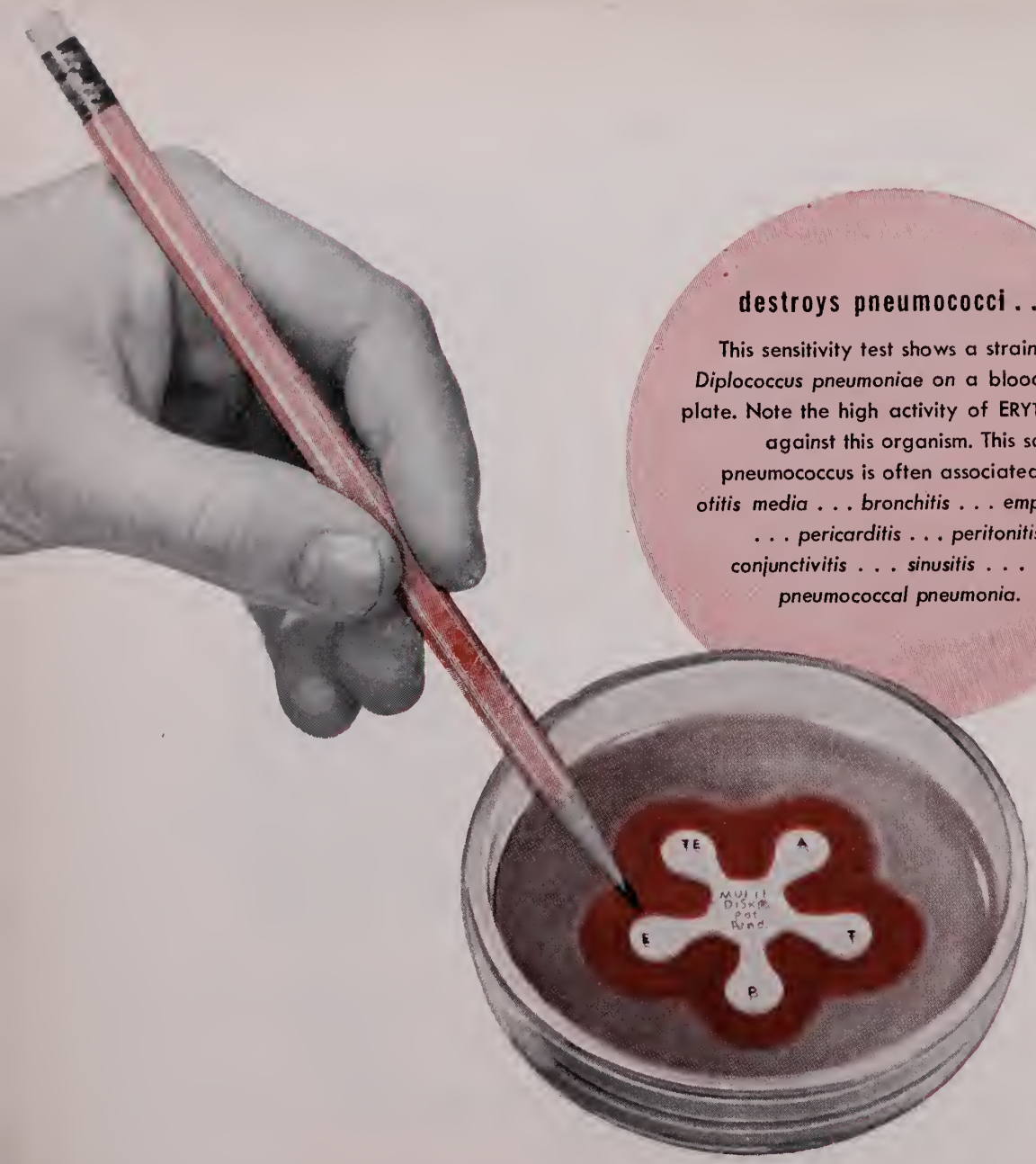
The above excerpts are taken from the new brochure

"USES OF WINE IN MEDICAL PRACTICE"

Recent research findings on the chemical and medical attributes of wine are summarized in this concise, informative booklet. A copy is available to you—at no expense—by writing to:

WINE ADVISORY BOARD, 717 MARKET STREET, SAN FRANCISCO 3, CALIFORNIA

*"Uses of Wine in Medical Practice"



destroys pneumococci . . .

This sensitivity test shows a strain of *Diplococcus pneumoniae* on a blood agar plate. Note the high activity of ERYTHROCIN against this organism. This same pneumococcus is often associated with *otitis media . . . bronchitis . . . empyema . . . pericarditis . . . peritonitis . . . conjunctivitis . . . sinusitis . . .* and *pneumococcal pneumonia.*

specific against coccic infections . . .

Now, you can prescribe an antibiotic (*Filmtab* ERYTHROCIN) that provides *specific therapy* against staph-, strep- or pneumococci. Since these organisms cause most bacterial respiratory infections (*and since they are the very organisms most sensitive to* ERYTHROCIN) doesn't it make good sense to prescribe ERYTHROCIN when the infection is coccic?

filmtab®

Erythrocin®
(Erythromycin Stearate, Abbott)
STEARATE

spares intestinal flora . . .

This sensitivity test shows ERYTHROCIN and the same four antibiotics against a typical intestinal strain of *E. coli*. Note that ERYTHROCIN and penicillin do not affect the growth of this organism at all—although the other antibiotics show marked inhibitory action.



. . . *with little risk of serious side effects*

Since ERYTHROCIN is inactive against gram-negative organisms, *it is less likely to alter intestinal flora—with an accompanying low incidence of side effects.* Also, your patients seldom get the allergic reactions sometimes seen with penicillin. Or loss of accessory vitamins during ERYTHROCIN therapy. *Filmtab* ERYTHROCIN (100 and 200 mg.) comes in bottles of 25 and 100 at pharmacies everywhere. Abbott

filmtab®

Erythrocin®

(Erythromycin Stearate, Abbott)

STEARATE

®Filmtab—Film sealed tablets; patent applied for

506157



Whenever the diet is faulty, the appetite poor, or the loss of food is excessive

through vomiting or diarrhea—

Valentine's
MEAT EXTRACT

stimulates the appetite,

increases the flow of digestive juices,

provides: supplementary amounts of vitamins, minerals and soluble proteins,

extra-dietary vitamin B_{12},

protective quantities of potassium, in a palatable and readily assimilated form.

Supplied in bottles of 2 or 6 fluidounces.

***Dosage** is 1 teaspoonful two or three times daily; two or three times this amount for potassium therapy.*

VALENTINE Company, Inc.
RICHMOND 9, VIRGINIA

Foot-so-Port Shoe Construction and its Relation to Weight Distribution



- Insole extension and wedge at inner carner af heel where suppart is most needed.
- Special Supreme rubber heels ore langer than mast anatamic heels and maintain the oppearance af narmal shoes.
- The patented arch suppart canstructian is guaranteed nat ta break dawn.
- Innersales are guaranteed nat ta crack, curl, ar callapse. Insulated by o special layer of Texan which also cushians firmly and uniformly.
- Foat-so-Part lasts were designed and the shae constructian engineered with arthopedic advice.
- Over nine millian pairs of men's,wamen's and children's Faot-so-Port Shaes have been sald.
- By a special pracess, using plastic pasitive casts of feet, we make mare custam shaes far palia, club feet ond all types af abnarmal feet than any ather manufacturer.

Write for detoils or contact your locol **FOOT-SO-PORT** *Shoe Agency. Refer to your Classified Directory*

Foot-so-Port Shoe Company, Oconomowoc, Wis.

The American Way

is peace, prosperity, and goodwill toward our fellow man—to invest our time in educating and learning; and our money in good citizens and fine institutions.

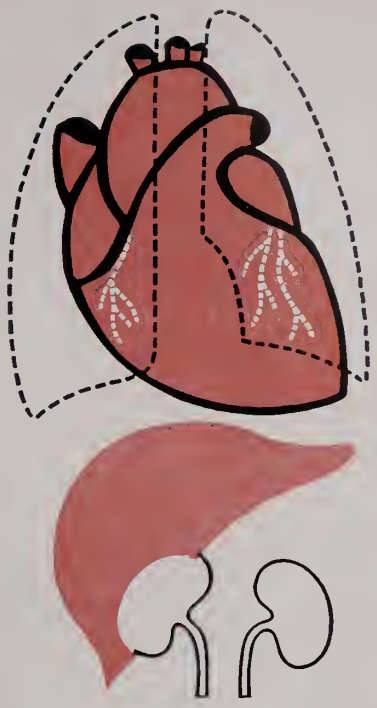


One of the finest institutions of your State is Richmond Hotels Incorporated, one that maintains the highest modern hotel standards . . . one that combines the hospitality and charm of the old and the convenience and comfort of the new.

John Marshall William Byrd
King Carter Richmond

Richmond Hotels Incorporated

know your diuretic



how safe is the diuretic you prescribe?

the utmost in safety, confirmed by long clinical usage, is one reason more physicians choose the organomercurials for diuresis. Their dependable action does not involve production of acidosis or specific depletion of potassium, and side effects due to widespread enzyme inhibition are absent.

TABLET

NEOHYDRIN®

BRAND OF CHLORMERODRIN (18.3 MG. OF 3-CHLOROMERCURI-2-METHOXY-PROPYLUREA IN EACH TABLET)

no "rest" periods • no refractoriness

NEOHYDRIN can be prescribed every day, seven days a week as needed

a standard for initial control of severe failure

MERCUHYDRIN® SODIUM

BRAND OF MERALLURIDE INJECTION

Leadership in diuretic research

Lakeside LABORATORIES, INC., MILWAUKEE 1, WISCONSIN

88655

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

today's health a must!

for your reception room



Physicians' Half-Price Rates

4 years	$4.00
3 years	3.25
1 year	1.50

AMERICAN MEDICAL ASSOCIATION
535 North Dearborn · Chicago 10, Illinois

Every Virginia Doctor Should Have These Books!

The history of medicine in the Old Commonwealth from Jamestown to the beginning of the present century is a work every doctor should be proud to own. Complete and intensely interesting.

Medicine In Virginia

In 3 Volumes

Published under Auspices of
Medical Society of Virginia

Reduced price to members of the Medical Society of Virginia

3 Volumes for $5.75
(formerly $9.75)

Order through

Medical Society of Virginia
1105 West Franklin Street
Richmond, Virginia

proof of performance shown by proof of preference



Sealy's Accepted Posturepedic Mattress now*

WORLD'S LARGEST SELLING POSTUREPEDIC MATTRESS

To patients suffering from morning backache due to sleeping on an inferior mattress or improperly fitted bedboards, you may suggest the Sealy Posturepedic, with confidence. *Accepted for advertising in the Journal of the American Medical Association, Sealy's Posturepedic is now the most widely used mattress of its type in the world. Since it is correctly *firm* it insures proper sleeping posture, gives natural support and complete comfort, too. For patients bothered by "low" morning backache, possibly caused by sleeping on a flabby mattress or make-shift bedboard, you may mention the Sealy Posturepedic *knowing* it is giving helpful relief in steadily increasing thousands of cases.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Sealy

SLEEPING ON A SEALY IS LIKE SLEEPING ON A CLOUD

SEALY MATTRESS COMPANY
Railroad Avenue, Bluefield, Va.
8 South Harvie Street, Richmond, Va.

Results With

'ANTEPAR'®*

against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

THIS DR

is the **symbol**
of the
Standardized
Tablets
Quinidine Sulfate
Natural
0.2 Gram
(approx. 3 grains)
produced by
Davies, Rose & Co., Ltd.

By specifying the name, the physician will be assured that this standardized form of Quinidine Sulfate Natural will be dispensed to his patient.

Clinical samples sent to physicians on their request

Davies, Rose & Co., Ltd.
Boston 18, Mass.

Q4

The . . . Thompson Homestead School

FOR EXCEPTIONAL CHILDREN

Year round private home and school for infants, children and adults on pleasant 250 acre farm near Charlottesville.

Write for booklet.

MRS. J. BASCOM THOMPSON, *Principal*

FREE UNION **VIRGINIA**

The State Board of Medical Examiners of Virginia

The next meeting of the Board will be held at the Richmond Hotel, Richmond, Virginia, June 15, 1955, and the examinations will be held at the same hotel June 16 to 18, inclusive. June 1st is the deadline for receipt of applications for the examination and documents and papers to be discussed and acted upon by the Board. The secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

MEDICINE IN VIRGINIA

17th, 18th and 19th Centuries

Reduced Price to Members of
The Medical Society of Virginia
3 Volumes for $5.75

Order Through
THE MEDICAL SOCIETY OF VIRGINIA
P. O. Box 5085 **Richmond 20, Va.**

In very special cases
A very superior Brandy



SPECIFY ★ ★ ★
HENNESSY
THE WORLD'S PREFERRED COGNAC BRANDY
84 PROOF Schieffelin & Company, New York, N.Y.

395
life insurance companies approve

CLINITEST®
BRAND
for rapid, reliable urine-sugar testing



reliability and standardization recognized by 9 out of 10 leading insurance companies *
convenience and time-saving appreciated by thousands of examining physicians

* Recent survey of 437 insurance companies



AMES DIAGNOSTICS
Adjuncts in Clinical Management

AMES COMPANY, INC. • ELKHART, INDIANA
Ames Company of Canada, Ltd., Toronto 62855

Why so many physicians

SPECIFY PABLUM CEREALS

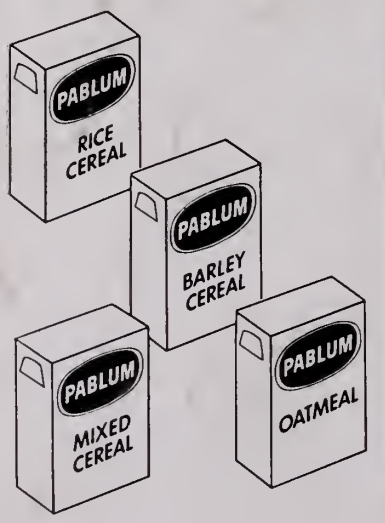


TOMMY started on Pablum Rice Cereal at the age of 2 months. He likes its smooth texture (all Pablum Cereals are smooth). Pablum Cereals give him plenty of iron—½ oz. supplies 4.2 mg.—to help prevent iron deficiency anemia.



MARY LOU likes Pablum Oatmeal. Since she has been eating Pablum Cereals her growing appetite is satisfied longer.

Pablum Rice Cereal
Pablum Barley Cereal
Pablum Oatmeal
Pablum Mixed Cereal





BARBARA—like other children—enjoys *all* four Pablum® Cereals. Each variety tempts her awakening taste buds. Pablum Cereals are scientifically packaged to insure freshness. The 'Handi-Pour' spout is an extra convenience for busy mothers.

Pablum Products

DIVISION OF MEAD JOHNSON & COMPANY
EVANSVILLE, INDIANA, U.S.A.

FFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

VIRGINIA MEDICAL MONTHLY

Contents

The Significance of Nodular Goiter, John C. McClintock, M.D. . . . 299

Union Welfare Funds and the Doctors, William A. Sawyer, M.D. . . . 302

Chlorpromazine in the Management of Nausea and Vomiting, Jose M. Torres Del Toro, M.D., Horace A. Albertson, M.D. . . . 306

Immediate and Early Physiological Reaction to Surgery, L. G. Richards, Jr., M.D. . . . 309

A Survey of Dog Bites in Arlington, S. P. Mayers, Jr., M.D., R. G. Beachley, M.D. . . . 317

Clinicopathological Conference, William R. Kay, M.D. . . . 320

(Continued on page 6)

JUL 13 1955
LIBRARY

Notably safe

In streptococcus, staphylococcus, pneumococcus infections — in over 80 percent of all bacterial infections you encounter . . .

consider ILOTYCIN (ERYTHROMYCIN, LILLY) FIRST

Lilly

THE MEDICAL SOCIETY OF VIRGINIA
RICHMOND, OCTOBER 16-19, 1955

JULY, 1955

normal living for....

at work and at play

adults should be encouraged
to work...and every
effort should be made
to keep children in school.
With accurate diagnosis
and proper treatment,
the majority of epileptics,
like the diabetics, can carry
on a normal life.

DILANTIN® SODIUM (diphenylhydantoin sodium, Parke-Davis)

a mainstay in anticonvulsant
therapy, alone or in
combination, for control of
grand mal and psychomotor
seizures--
with the added advantages
of greater safety and of little
or no hypnotic effect.

DILANTIN Sodium is supplied in a variety of forms -- including Kapseals® of 0.03 Gm. (½ gr.) and 0.1 Gm. (1½ gr.) in bottles of 100 and 1,000.



MEDICAMENTA VERA
Parke, Davis + Company
DETROIT, MICHIGAN

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April 1874)

Published monthly by The Medical Society of Virginia.

PUBLICATION COMMITTEE

Lewis H. Bosher, Jr., M.D., *Chairman and Editor*

Wyndham B. Blanton, M.D. Lloyd B. Burk, M.D.

with

EDITORIAL BOARD

J. Morrison Hutcheson, M.D.

Cato Drash, M.D.

Ennion S. Williams, M.D.

A. Brownley Hodges, M.D.

Hugh H. Trout, Jr., M.D.

The MONTHLY is not responsible for the opinions and statements of its contributors.

All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

Managing Editor—E. SPENCER WATKINS

1105 West Franklin Street, Richmond 20.

Annual Subscription—$2.00 Single Copies—25¢

Second-class mail privileges authorized at Richmond, Virginia

THE MEDICAL SOCIETY OF VIRGINIA

OFFICERS

President—CARRINGTON WILLIAMS, M.D., Richmond

President-Elect—JAMES P. KING, M.D., Radford

Vice-Presidents—JAMES W. LOVE, M.D., Alexandria
WAVERLY R. PAYNE, M.D., Newport News
BENJAMIN W. RAWLES, JR., M.D., Richmond

Executive Secretary-Treasurer—ROBERT I. HOWARD, Richmond

Councilors—A. A. CREECY, M.D., Newport News
WALTER P. ADAMS, M.D., Norfolk
GUY W. HORSLEY, M.D., Richmond
W. J. OZLIN, M.D., South Hill
L. P. BAILEY, M.D., Nathalie
FRANK A. FARMER, M.D., Roanoke
H. W. MILLER, M.D., Woodstock
McLEMORE BIRDSONG, M.D., Charlottesville
JAMES P. WILLIAMS, M.D., Richlands
HARRY C. BATES, JR., M.D., Arlington

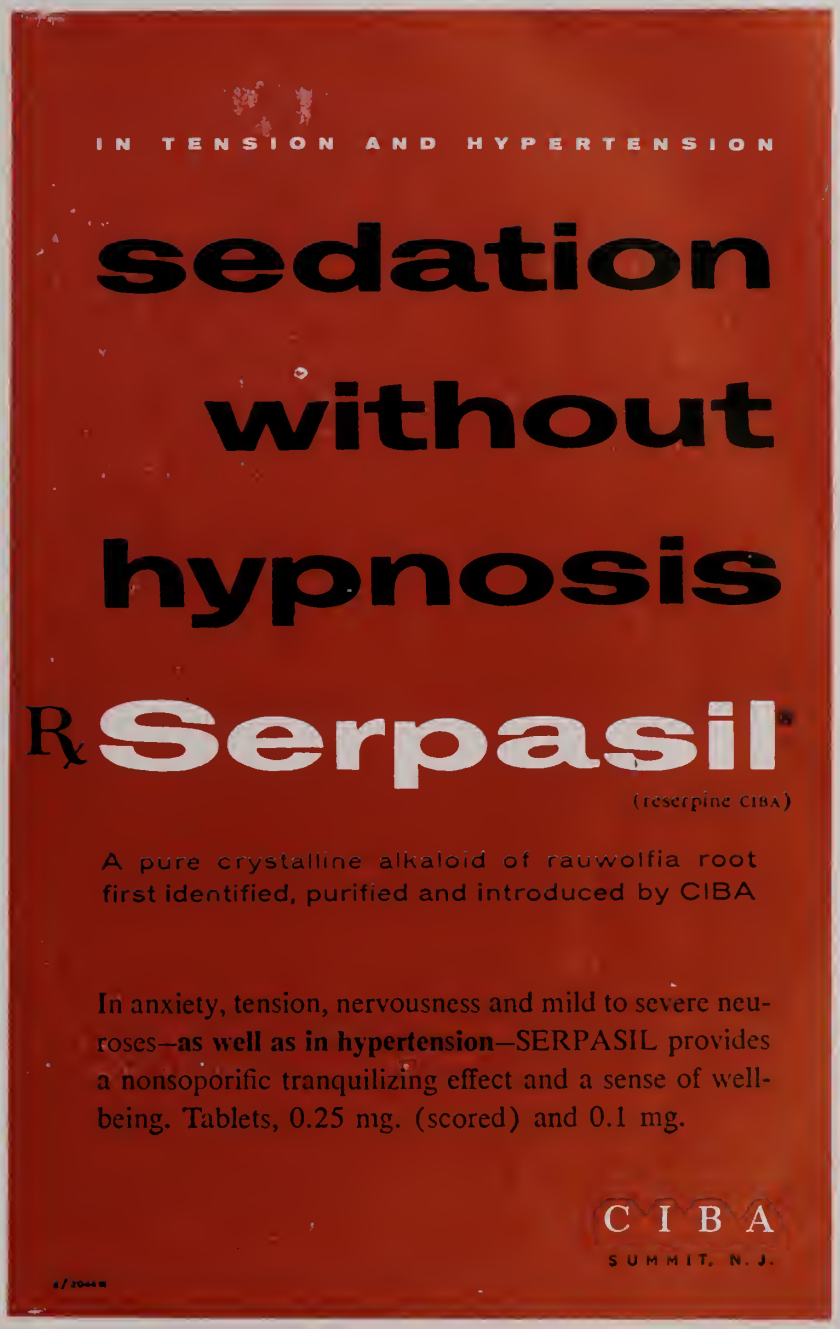
Delegates to A.M.A.
J. M. HUTCHESON, M.D., Richmond
VINCENT W. ARCHER, M.D., Charlottesville

Alternate Delegates to A.M.A.
ALLEN BARKER, M.D., Roanoke
W. LINWOOD BALL, M.D., Richmond

Executive Office—1105 W. Franklin St., Richmond 20.

INDEX TO ADVERTISERS

American Meat Institute ---- 16
Appalachian Hall ---- 30
Arlington-Funk Laboratories ---- 10-11
Ayerst ---- 19
Bayer Company Division, The ---- 36
Burroughs Wellcome & Co. (U. S. A.) Inc. ---- 12-13
Ciba ---- 5
Davies, Rose & Co., Ltd. ---- 13
First and Merchants National Bank of Richmond ---- 12
Foot-so-Port Shoe Company ---- 6
Garst Brothers Dairy, Inc. ---- 6
Gill Memorial Eye, Ear and Throat Hospital, Inc. ---- 25
Imperial Car Distributors, Inc. ---- 39
Jefferson, A. G. ---- 14
Johnston-Willis Hospital ---- 32
Keeley Institute, The ---- 32
Keleket X-Ray Corporation ---- 20
Lederle Laboratories Division ---- 40-41
Lily & Co., Eli ---- Front Cover, 22
McGuire Clinic—St. Luke's Hospital ---- 24
Mead Johnson & Company ---- 44
Medical College of Virginia ---- 32
Medical Society of Virginia, The ---- 4
New York Polyclinic Medical School and Hospital, The ---- 9
Parke, Davis & Company ---- 2-3
Patterson's Safe Service Drug Stores ---- 14
Peoples Drug Stores ---- 43
Pfizer Laboratories ---- 17-35
Plyler's Nursing Home, Mrs. ---- 27
Richmond Eye Hospital, Richmond Ear, Nose and Throat Hospital ---- 28
Richmond Hotels Incorporated ---- 6
Riverside Convalescent Home ---- 28
Riverside Hospital ---- 25
Saint Albans ---- 29
St. Elizabeth's Hospital ---- 26
Schering Corporation ---- 21
Sealy Mattress Company ---- 14
Searle & Co., G. D. ---- 23
Sharpe & Dohme ---- 7, 33
Squibb ---- 15
State Board of Medical Examiners of Va., The ---- 32
Stuart Circle Hospital ---- 26
Terrace Hill Nursing Home, Inc. ---- 24
Thompson Homestead School, The ---- 32
Tucker Hospital, Inc. ---- 30
Viceroy Cigarettes ---- 8
Virginia Bakers Council, The ---- 18
Virginia Medical Monthly ---- 4
Upjohn Company, The ---- 9, 19, 27, 37
U. S. Savings Bonds ---- 34
United States Brewers Foundation ---- 42
Westbrook Sanatorium ---- 29
White Cross Hospital ---- 31
Williams Printing Co. ---- 37
Winthrop-Stearns, Inc. ---- 38



New! SERPASIL® ELIXIR
Each 4-ml. teaspoonful contains 0.2 mg. of Serpasil

Foot-so-Port Shoe Construction and its Relation to Weight Distribution



- Insole extension and wedge at inner corner of heel where support is most needed.
- Special Supreme rubber heels ore longer than most anatomic heels and maintain the appearance of normal shoes.
- The patented arch support construction is guaranteed not to break down.
- Innersoles are guoranteed not to crack, curl, or collapse. Insulated by o special layer of Texon which also cushions firmly and uniformly.
- Foot-so-Port lasts were designed and the shoe construction engineered with orthopedic advice.
- Over nine million pairs of men's,women's and children's Foot-so-Port Shoes have been sold.
- By a special process, using plastic positive casts of feet, we moke more custom shoes for polio, club feet ond all types of abnormal feet than any other monufocturer.

Write for details or contact your local **FOOT-SO-PORT** *Shae Agency. Refer to your Classified Directory*

Foot-so-Port Shoe Company, Oconomowoc, Wis.

The American Way

is peace, prosperity, and goodwill toward our fellow man—to invest our time in educating and learning; and our money in good citizens and fine institutions.



One of the finest institutions of your State is Richmond Hotels Incorporated, one that maintains the highest modern hotel standards . . . one that combines the hospitality and charm of the old and the convenience and comfort of the new.

John Marshall William Byrd
King Carter Richmond

Richmond Hotels Incorporated

GRADE A PASTEURIZED PRODUCTS

GARST BROS. DAIRY INC.

DIAL 5501

GRADE A MILK
HOMOGENIZED MILK (Natural Vitamin D added)
GOLDEN GUERNSEY MILK
GOLDEN FLAKE BUTTERMILK
SKIM MILK—COFFEE CREAM
WHIPPING CREAM—COTTAGE CHEESE
DARI-RICH CHOCOLATE MILK
GARST BROS. DAIRY BUTTER

"ROANOKE'S MOST MODERN DAIRY"

DIAL 5501

LABORATORY CONTROL
FOR YOUR PROTECTION

CONTENTS
(Continued)

Public Health ---------- 325
Mental Health ---------- 326
Woman's Auxiliary ---------- 329
Book Announcements ---------- 330
President's Message ---------- 331
Editorial ---------- 332
Society Proceedings ---------- 333
News ---------- 334
Obituaries ---------- 337

INDEX TO ADVERTISERS—Page 4

Entered as Second Class Matter at the Postoffice, Richmond, Va.

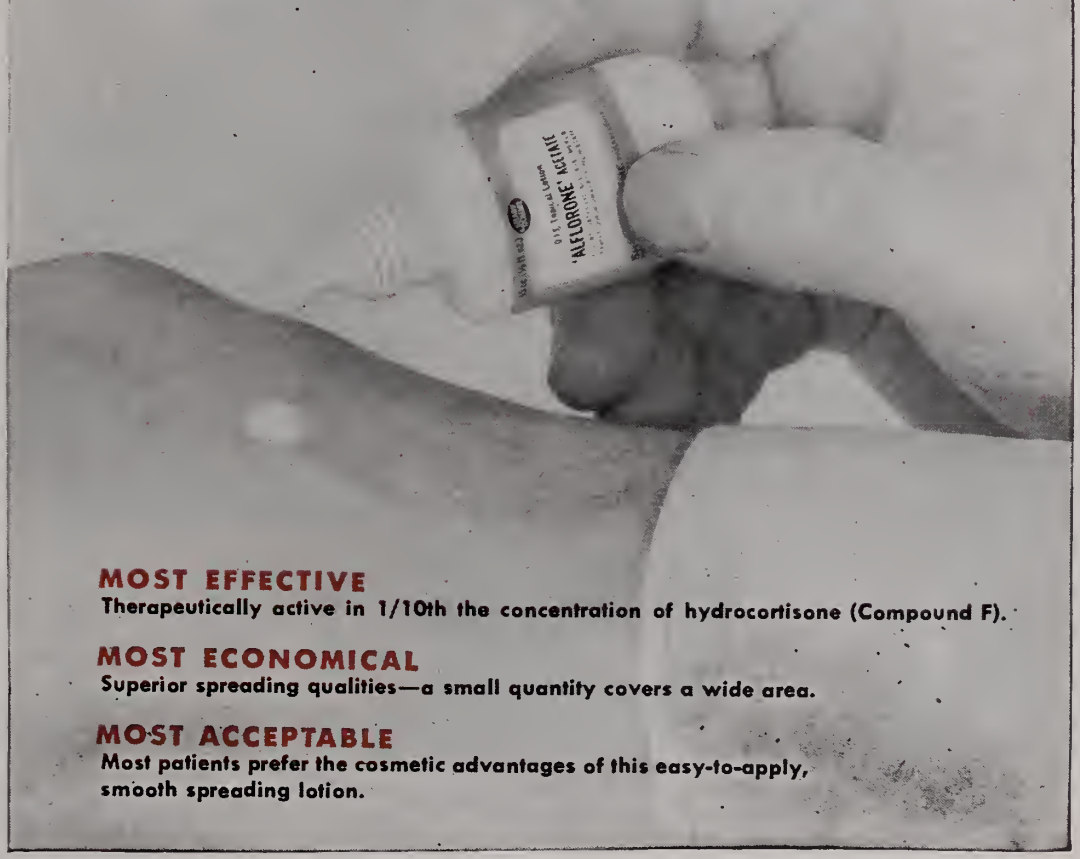
NEW- IN THE TOPICAL TREATMENT OF ALLERGIC SKIN CONDITIONS

TOPICAL LOTION

'ALFLORONE'

ACETATE

(FLUDROCORTISONE ACETATE, MERCK) 9 ALPHA-FLUOROHYDROCORTISONE ACETATE



MOST EFFECTIVE
Therapeutically active in 1/10th the concentration of hydrocortisone (Compound F).

MOST ECONOMICAL
Superior spreading qualities—a small quantity covers a wide area.

MOST ACCEPTABLE
Most patients prefer the cosmetic advantages of this easy-to-apply, smooth spreading lotion.

Supplied in a cosmetically elegant base in two concentrations: 0.25% and 0.1% in 15 cc. plastic squeeze bottles.
Also available: Alflorone Topical Ointment in 5 gm. tubes—two concentrations—0.25% and 0.1%.

SHARP & DOHME
Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

WEIGHT FOR WEIGHT, THE MOST EFFECTIVE ANTI-INFLAMMATORY AGENT YET DEVELOPED FOR TOPICAL USE



DOCTOR, here's a question and an answer you may find useful when patients ask about cigarettes:

What do Viceroys do for you that no other filter tip can do?



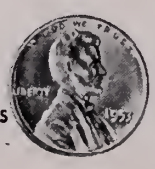
These filter traps, doctor, are composed of a pure white non-mineral cellulose acetate. They provide maximum filtering efficiency without affecting the flow of the smoke.

And, in addition, they enhance the flavor of Viceroy's quality tobaccos to such a degree that smokers report they taste even better than cigarettes without filters.

King-Size Filter Tip **VICEROY**

WORLD'S MOST POPULAR FILTER TIP CIGARETTE

ONLY A PENNY OR TWO MORE THAN CIGARETTES WITHOUT FILTERS





Upjohn
KALAMAZOO

Indicated wherever oral cortisone or hydrocortisone is effective. Available in 5 mg. tablets in bottles of 30 and 100. Usual dosage is ½ to 1 tablet three or four times daily

Deltasone*

requires only 1/5 the dose of cortisone

*Trademark for the Upjohn brand of prednisone (delta-1-cortisone)

THE NEW YORK POLYCLINIC
MEDICAL SCHOOL AND HOSPITAL

(Organized 1881)

(The Pioneer Post-Graduate Medical Institution in America)

DERMATOLOGY AND SYPHILOLOGY

A three year course fulfilling all the requirements of the American Board of Dermatology and Syphilology. Also five-day seminars in Dermatopathology, for specialists and for general practitioners.

OBSTETRICS and GYNECOLOGY

A two months full time course. In Obstetrics: lectures, prenatal clinics; attending normal and operative deliveries; detailed instruction in operative obstetrics (manikin). X-ray diagnosis in obstetrics and gynecology. Care of the newborn. In Gynecology: lectures; touch clinics; witnessing operations; examination of patients pre-operatively; follow-up in wards post-operatively. Obstetrical and gynecological pathology. Culdoscopy. Studies in Sterility. Anesthesiology. Attendance at conferences in obstetrics and gynecology. Operative gynecology on the cadaver.

PROCTOLOGY AND GASTROENTEROLOGY

A combined course comprising attendance at clinics and lectures; instruction in examination, diagnosis and treatment; pathology, radiology, anatomy, operative proctology on the cadaver, anesthesiology, witnessing of operations, examination of patients preoperatively and postoperatively in the wards and clinics; attendance at departmental and general conferences.

ANESTHESIOLOGY

A three months full time course covering general and regional anesthesia with special demonstrations in the clinics and on the cadaver of caudal, spinal, field blocks, etc.; instruction in intravenous anesthesia, oxygen therapy, resuscitation, aspiration bronchoscopy; attendance at departmental and general conferences.

For Information concerning these and other Courses please Address:

THE DEAN, 345 West 50th St., New York 19. N. Y.

brand new!

arlidin

helps your peripheral vascular patients



"strong muscle vasodilator activity and an adequate increase in cardiac output"[1]

in intermittent claudication
diabetic vascular disease
Raynaud's disease
thromboangiitis obliterans
ischemic ulcers
night leg cramps

arlidin* HCl
brand of nylidrin hydrochloride
tablets **6 mg.**
dose: 1 tablet t.i.d. or q.i.d.
bottles of 50, 100 and 1000.
*Trade Mark



vasorelaxation
more tissue oxygen
improved muscle metabolism
pain relief
well tolerated • rapid • sustained

walk longer, further, in more comfort



ARLIDIN dilates peripheral blood vessels in distressed muscles, relaxes spasm, increases both cardiac and peripheral blood flow . . . to send more blood where more blood is needed.

effective "vasodilative agent of minimal toxicity and optimal tolerance"[2]

1. Pomeranze, J. et al.: Angiology, June, 1955.
2. Freedman, L.: Angiology 6:52, Feb. 1955.

Write for samples and literature

arlington-funk laboratories
division of U. S. VITAMIN CORPORATION
250 E. 43rd St., New York 17, N.Y.

Protected by U. S. Pat. No. 2,661,372 and 2,661,373

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

specify

LEDERLE

POLIOMYELITIS IMMUNE GLOBULIN

(human)

Lederle

For the modification of measles and the prevention or attenuation of infectious hepatitis and poliomyelitis.

LEDERLE LABORATORIES DIVISION
AMERICAN Cyanamid COMPANY Pearl River, New York



1st

In Virginia

FIRST AND MERCHANTS
NATIONAL BANK OF RICHMOND
MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

THIS DR

is the **symbol**
of the
Standardized
Tablets
Quinidine Sulfate
Natural
0.2 Gram
(approx. 3 grains)
produced by
Davies, Rose & Co., Ltd.

By specifying the name, the physician will be assured that this standardized form of Quinidine Sulfate Natural will be dispensed to his patient.

Clinical samples sent to physicians on their request

Davies, Rose & Co., Ltd.
Boston 18, Mass.

Q4

Results With

'ANTEPAR'®*

against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.:
J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.:
Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.:
J. Pediat. 45:419, 1954.

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored.

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

proof of performance
shown by
proof of preference



Sealy's Accepted Posturepedic Mattress now*

WORLD'S LARGEST SELLING POSTUREPEDIC MATTRESS

To patients suffering from morning backache due to sleeping on an inferior mattress or improperly fitted bedboards, you may suggest the Sealy Posturepedic, with confidence.

*Accepted for advertising in the Journal of the American Medical Association, Sealy's Posturepedic is now the most widely used mattress of its type in the world. Since it is correctly *firm* it insures proper sleeping posture, gives natural support and complete comfort, too. For patients bothered by "low" morning backache, possibly caused by sleeping on a flabby mattress or make-shift bedboard, you may mention the Sealy Posturepedic *knowing* it is giving helpful relief in steadily increasing thousands of cases.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Sealy

SLEEPING ON A SEALY IS LIKE SLEEPING ON A CLOUD

SEALY MATTRESS COMPANY
Railroad Avenue, Bluefield, Va.
8 South Harvie Street, Richmond, Va.

At All

DEPENDABLE

PRESCRIPTION SERVICE

and

SERVICE TO PHYSICIANS

PATTERSON'S
SAFE SERVICE DRUG STORES

Prescription Specialists

Lynchburg, Va. Martinsville, Va.
Danville, Va. Altavista, Va.
Winston-Salem, N. C.

For the
Discriminating
Eye Physician

Depend on the Services of a Guild Optician

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

in
Lynchburg, Virginia

A. G. JEFFERSON

Ground Floor **Allied Arts Bldg.**

Exlusively Optical

ANNOUNCING
THE SECOND
NEW
CRYSTALLINE
CORTICOSTEROID
METICORTelone
PREDNISOLONE, SCHERING (METACORTANDRALONE)
DISCOVERED AND
INTRODUCED BY
Schering



now available for

METIC

"possesses an augmente

in cortica

METICORTELONE possesses hormonal properties, and anti-rheumatic and anti-inflammatory effectiveness similar to those of METICORTEN,[1-4] the first of the new corticosteroids. Both are five times more active, milligram for milligram, than cortisone or hydrocortisone. METICORTELONE and METICORTEN are relatively free from significant water or electrolyte disturbances.

PREDNISOLONE, SCHERING (METACORTANDRALON

clinical use

ORTelone

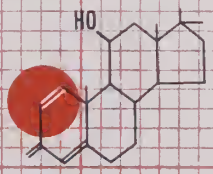
PREDNISOLONE, SCHERING (METACORTANDRALONE)

herapeutic ratio"[1]

ormone therapy

METICORTELONE is an analogue of hydrocortisone, as METICORTEN is of cortisone. The availability of these new steroids, both discovered by Schering research, provides the physician with two therapeutic agents of approximately equal effectiveness.

METICORTELONE – Schering's brand of prednisolone, also known as metacortandralone.



1. Bunim, J. J.; Pechet, M. M., and Bollet, A. J.: J.A.M.A. *157*:311, 1955.
2. Waine, H.: Bull. Rheumat. Dis. *5*:81, 1955.
3. Tolksdorf, S., and Perlman, P.: Fed. Proc. *14*:377, 1955.
4. Herzog, H. L., and others: Science *121*:176, 1955.
5. Dordick, J. R., and Gluck, E. J.: J.A.M.A. *158*:166, 1955.

Schering

METICORTELONE is now available as 5 mg. buff-colored tablets, bottles of 30 and 100. In the treatment of rheumatoid arthritis, dosage of METICORTELONE begins with an average of 20 to 30 mg. (4 to 6 tablets) a day. This is gradually reduced by 2½ to 5 mg. until maintenance dosage, which may be between 5 to 20 mg., is reached. The total 24-hour dose should be divided into 4 parts and administered *after meals and at bedtime*. Patients may be transferred directly from hydrocortisone or cortisone to METICORTELONE without difficulty.

first of the new Schering corticosteroids

METICORTEN

PREDNISONE, SCHERING (METACORTANDRACIN)

- replacing the older corticosteroids
  in
  rheumatoid arthritis
  intractable asthma
  other collagen diseases

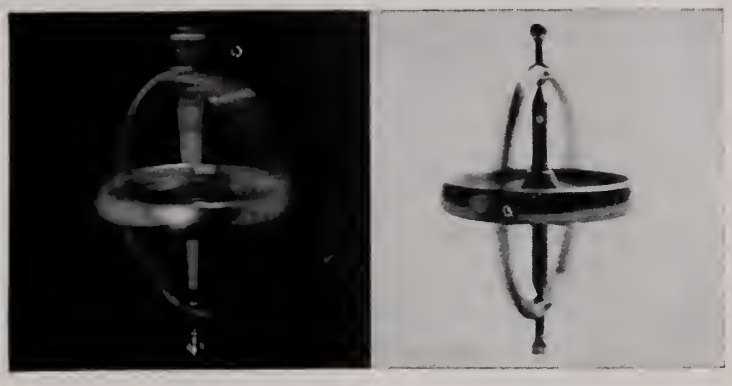
- more active than hydrocortisone or cortisone
  milligram for milligram
  relatively free of significant metabolic,
  water or electrolyte disturbances.[5]

METICORTEN is available as 5 mg. scored, white tablets in bottles of 30 and 100.

METICORTELONE,* brand of prednisolone (metacortandralone).
METICORTEN,* brand of prednisone (metacortandracin).
*T.M.
MC-J-516

SCHERING CORPORATION • BLOOMFIELD, NEW JERSEY Schering SCHERING

a non-barbiturate, non—habit-forming, tranquilizing and stabilizing agent



RAU-SED

(Squibb Reserpine)

Rau-sed may be employed to achieve a calming, tranquilizing effect. Rau-sed may be found useful in situations accompanied by stress and anxiety and has been reported helpful in a number of physical disorders with associated emotional overlay (such as headache, dermatologic disorders, gynecologic disorders, enuresis, etc.).

Oral Dosage for Office Practice: The usual daily dose may range from 0.25 mg. to 1.5 mg. Dosage may start with 0.25 mg. t.i.d., and may be adjusted upward or downward. It is important, in adjusting Rau-sed dosage, to consider that results may not appear for one to two weeks after therapy is instituted. When a maintenance level is achieved, Rau-sed may be given as a single daily dose or in divided doses, as the patient prefers. Some patients may need and tolerate higher dosage; in such patients, Rau-sed has proved most effective in conjunction with psychotherapy. *Note:* Patients receiving large doses, or those who receive the drug over a long period, should be watched for signs of depression; this can be alleviated by reducing the dosage or withdrawing the drug.

Supply: 0.1 mg. and 0.25 mg. tablets, bottles of 100 and 1000; 0.5 mg. tablets (scored), bottles of 50 and 500; 1.0 mg. tablets (scored), bottles of 30, 100, and 500; 4.0 mg. tablets (scored), bottles of 100 and 1000 (for psychiatric use). RAU-SED Parenteral, for the treatment of hospitalized psychiatric patients, 5.0 mg. and 10.0 mg. ampuls.

"RAU-SED" IS A SQUIBB TRADEMARK

SQUIBB A NAME YOU CAN TRUST

Meat...

and the Problem of Senile Osteoporosis

Perhaps under the still-persisting influence of the mistaken "health legends" of former days, many older people tend to eat less meat and other nutritionally valuable protein foods than they should; thus, the osteoporosis that occurs naturally in the aging body may be unduly augmented.[1]

A balanced diet supplying optimal amounts of protein is essential, and appears to be useful in preventing and in slowing the progress of osteoporosis in senile persons. Adequate protein intake is instrumental in supporting osteoblastic activity so necessary for production of osseous matrix. "When osteoporosis is present, the prime objective is an adequate, high protein diet (a gram or more [of protein] per kilogram of body weight), to aid in building bony matrix for osteoblastic activity."[1]

Meat constitutes one of the most important sources of protein in the nutrition of the aged. Meat offers biologically effective protein—effective in the maintenance as well as the reconstruction of wasted or damaged tissue. Its natural content of B vitamins and of essential minerals not only helps to supply the daily needs for these nutrients, but is necessary for the proper utilization of amino acids.[2]

The appealing taste of meat, its appetite-stimulating quality, and its almost complete digestibility also are important in geriatric nutrition.

---

1. Rechtman, A. M., and Yarrow, M. W.: Osteoporosis, Am. Pract. & Digest Treat. 5:691 (Sept.) 1954.
2. Cannon, P. R.; Frazier, L. E., and Hughes, R. H.: Factors Influencing Amino Acid Utilization in Tissue Protein Synthesis, in Symposium on Protein Metabolism, New York, The National Vitamin Foundation, Inc., 1954, pp. 55-90.

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

American Meat Institute
Main Office, Chicago . . . Members Throughout the United States



EFFECTIVE



PROVED

broad-spectrum
antibiotic
for intramuscular use

Terramycin®

Brand of oxytetracycline hydrochloride HCl

INTRAMUSCULAR

- Rapidly attained therapeutic levels
- Proved broad-spectrum action
- For use when oral therapy is not practical or is contraindicated
- Just 100 mg. (one single-dose vial) every 8 to 12 hours is adequate for most infections in adults
- Usually well tolerated on **DEEP** intramuscular injection *(Contains procaine to minimize local tissue reaction)*
- When reconstituted, forms a *clear* solution

Supplied: In dry powder form, in single-dose vials. When reconstituted by addition of 2.1 cc. of sterile aqueous diluent, each single dose (2 cc.) contains:

Crystalline Terramycin hydrochloride	100 mg.
Magnesium chloride	5%
Procaine hydrochloride	2%

Pfizer

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, N. Y.

Enriched Bread in *Dietary Planning*



BECAUSE of its nutritional, dietetic, and physiologic values, enriched bread simplifies in many ways the organization of dietaries suited to the special requirements of patients.



FOR THE SURGICAL PATIENT...

The first solid food after surgery is toasted enriched bread, slightly buttered. This practice has become a tradition—almost a ritual—because of the very nature of toast. It is bland, easily digested, and yields little inert residue. Its golden, warm appearance is pleasing to the eye; its mild taste appeals to the palate. Its nutrient energy plays a role in the physiologic and psychologic re-awakening of metabolic processes depressed under the "nothing by mouth" conditions immediately following surgery. With increasing tolerance for food it becomes an important component of the soft diet and later of the therapeutic diet.[1] Its valuable protein, B vitamins, iron, calcium and calories help the patient to regain nutritional efficiency.



FOR THE CONVALESCENT...

Enriched bread figures prominently in the dietary regimen in convalescence after acute infections, other serious illness, or trauma.

Supplying 13 grams of high grade protein per 5½ ounces (estimated average daily consumption), enriched bread makes an important contribution to the daily protein need. Its protein, comprising flour, milk, and yeast proteins, functions in the healing of wounds and in the rebuilding of wasted tissues.[2] In addition, 5½ ounces of enriched bread supplies on the average 0.37 mg. of thiamine, 0.23 mg. of riboflavin, 3.4 mg. of niacin, 4.1 mg. of iron, 137 mg. of calcium, and 418 calories.



FOR THE CHRONICALLY ILL...

In the formulation of palatable and nutritious menus for the debilitated, chronically ill, the advantages of enriched bread serve well.

In anorexia, enriched bread or toast stimulates the appetite. It is easily masticated and readily digested, features particularly important for elderly patients. Its favorable textural influence within the alimentary tract[3] promotes good utilization of ingested foods.

---

1. The Committee on Dietetics of the Mayo Clinic: Mayo Clinic Diet Manual, ed. 2, Philadelphia, W. B. Saunders Company, 1954.
2. Sherman, H.C.: Chemistry of Food and Nutrition, ed. 8, New York, The Macmillan Co., 1952, pp. 212, 599.
3. Sherman, H.C.: The Nutritional Improvement of Life, New York, Columbia University Press, 1950, p. 133.

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

THE VIRGINIA BAKERS COUNCIL
In co-operation with
THE AMERICAN BAKERS ASSOCIATION

Upjohn
KALAMAZOO

Indicated wherever oral cortisone or hydrocortisone is effective • Available in 5 mg. tablets in bottles of 30 and 100 • Usual dosage is ½ to 1 tablet three or four times daily

Delta-Cortef*

Less sodium retention, less potassium depletion

*Trademark for the Upjohn brand of prednisolone (delta-l-hydrocortisone)

With "Premarin," relief of menopausal distress is prompt and the "sense of well-being" imparted is highly gratifying to the patient.

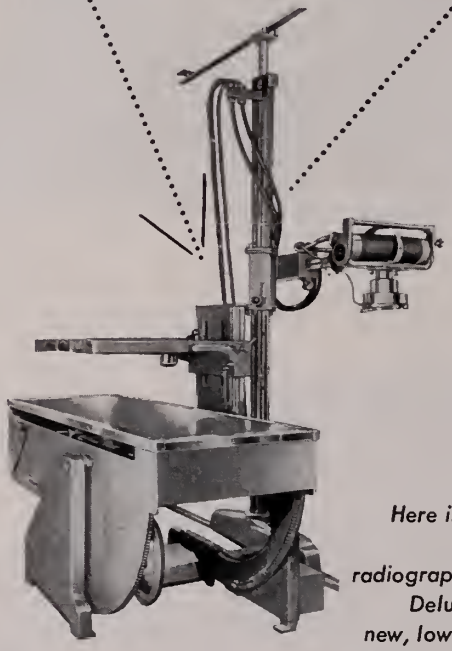
"Premarin"® — Conjugated Estrogens (equine)

5513

Only IN THE KELEKET
MULTISCOPE
X-ray Combination



ADVANCED DIAGNOSTIC FACILITIES plus HIGH KILOVOLTAGE



Here is everything in a single, space-saving diagnostic combination for advanced radiographic and fluoroscopic technics: Deluxe quality, ruggedness and convenience . . . new, low price . . . two-tube operation . . . yet especially designed for high kilovoltage technics . . . full-wave rectified . . . 200 MA capacity at 125 PKV. Write for free detailed literature today!

Kelly-Koett
The Oldest Name in X-Ray

KELEKET X-RAY CORPORATION
228-7 W. 4th St., Covington, Ky.

Call your local factory representative direct for Sales and Service

KELEKET X-RAY CORP.
Richmond, Va.
1303 Summit Ave.
Tel.: 84-4526

KELEKET X-RAY CORP.
4321 Harford Road
Baltimore 14, Md.

KELEKET X-RAY CORP.
226 Massachusetts Ave.
Washington 2, D.C.
Tel.: Nat'l. 8-4049



for hay fever patients



preserve summer pleasures with these advantages

- unusually rapid relief
- outstanding freedom from side effects
- maximum convenience

in the greatest variety of oral forms

CHLOR-TRIMETON REPETABS, 8 mg.
up to 12 hours of uninterrupted relief reported with just one dose

CHLOR-TRIMETON REPETABS, 12 mg.
for prolonged therapy in more difficult cases

CHLOR-TRIMETON Tablets, 4 mg.
for initiating therapy, maintenance therapy or adjusting dosage

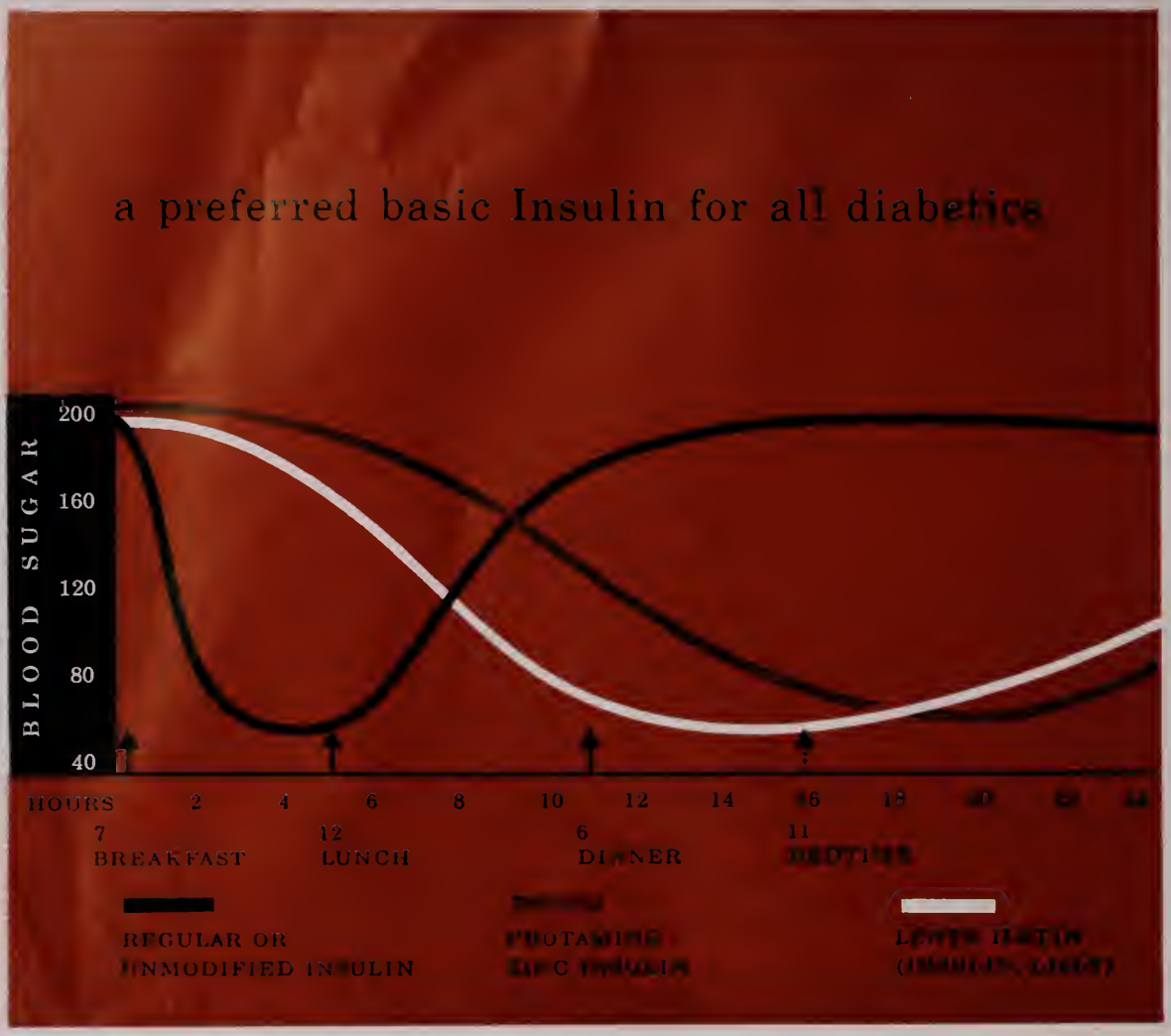
CHLOR-TRIMETON REPETABS with Sodium Pentobarbital.
¾ gr. for nightlong relief and assured sleep

CHLOR-TRIMETON Syrup, 2 mg. per 4 cc.
palatable, compatible liquid

CHLOR-TRIMETON® maleate, brand of chlorprophenpyridamine maleate.
REPETABS,® Repeat Action Tablets.

SCHERING

CT-J-56



Lente Iletin (Insulin, Lilly)

Another step toward the ideal Insulin

Simplified administration—Only one injection a day controls the majority of diabetic patients.

Simplified therapy—Approximately 85 percent of all diabetic patients can be treated with Lente Iletin (Insulin, Lilly) alone.

Simplified formula—Lente Iletin (Insulin, Lilly) is the only intermediate-acting Insulin free of foreign modifying proteins.

Simplified identification—The new distinctive "Hexanek" bottle makes identification easy.

Write for descriptive literature today.



Supplied in U-40 and U-80 strengths at all pharmacies.

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.

The Virginia
MEDICAL
MONTHLY

July, 1955
Vol. 82, No. 7
Whole No. 1237

The Significance of Nodular Goiter

JOHN C. McCLINTOCK, M.D.
Albany, New York

FIGURE one shows the posterior surface of a nodular goiter removed after one year of treatment solely with iodine. The family physician, who advised this therapy, told the patient it would "Shrink the goiter", but while this process was presumably going on, cancer was growing into the internal jugular vein at A and into the left innominate vein at B. Could you have predicted the growth of cancer in this nodular goiter? Can you fortell which nodular goiter will remain quiescent or continue its benign growth until mechanical obstructive symptoms appear, or can you select the nodular thyroid that will produce toxic manifestations? Because no one yet has shown such supernatural powers it is necessary for each physician to weigh the evidence and formulate his own conclusions about the significance of nodular goiter.

Experience is one of the major ingredients of any opinion. If you have been called upon to remove large, bulky cancers of the thyroid just to permit better radiation therapy, if you have observed the lingering misery that tracheostomatized patients lead with thyroid gland malignancy, then, perhaps you too, will regard all nodular goiters as surgical entities. For the mammary gland, cancer education has brought about widespread public recognition of the wisdom of biopsy when a lump is found in the breast. Neither the public nor the medical profession has been so fully informed about thyroid nodules. Hinton and Lord[1] drew attention to the similarity between mammary and thyroid gland tumors in a report that frequently has been overlooked. These authors did find 6.8 per cent of breast biopsies to contain cancer, but they also reported, and this should be emphasized, that a numerically equal series of thyroid tumors revealed malignant disease in 7.6 per cent. It seems reasonable, therefore, to suggest that we should adopt a consistent attitude toward all potentially malignant tumors and advise surgical intervention with pathologic study. A cancer conscious public is demonstrating greater and sometimes more justifiable concern about nodular goiter than the physician whose advice is sought. The medical profession dare not risk



Fig. 1.—Posterior surface, follicular carcinoma of the thyroid with tumor tissue growing into the right internal jugular vein at A and the left innominate vein at B.

From the Department of Surgery, Albany Medical College, Albany, New York.

Presented at the First Interstate Scientific Assembly of the Medical Society of the District of Columbia and The Medical Society of Virginia, Washington, D. C., November 1-3, 1954.

condemning even one patient to the horrors of thyroid cancer if early removal of a nodule might prevent malignant disease or perhaps effect a cure.

The author has consistently advised removal of all nodular goiters. A nodular goiter is defined as a thyroid gland in which one or more lumps are found on palpation. Such lumps are to be distinguished from lobulations in a hypertrophied gland because lobulations do not require surgery. Clinical distinction between an adenoma and a carcinoma is frequently impossible, but since both of these lesions demand surgery it is incumbent upon the physician to advise their removal for pathologic study. The following review of cases is based upon one five year period in a much larger experience with this problem.

The author's interest in single thyroid nodules began with a study of patients operated upon in the Albany Hospital from 1930 to 1947.[2] During that period 382 patients were selected as having single nodules based upon the physical findings and pathologic findings. In this group cancer was found in 11.2 per cent. Beginning in 1949 notations were made at the time of the operation to record whether or not a single nodule was present. During the ensuing five years ending December 31, 1953, one thousand and ninety-eight patients with nodular goiter were operated upon by the author, and in this new series the records show that a single nodule was found in 347 patients. Cancer was first diagnosed by the pathologist in 27 patients of this group. Among 486 patients similarily listed, but with multiple nodular goiters in this five year period, the pathologist found cancer in 12 patients. During the entire five years only ten patients were examined in whom a pre-operative diagnosis of cancer was made and confirmed by pathologic examination. Table one records these patients and the percentages of cancer in each group. The number of cancers in the multiple nodular group and the over-all total coincide quite closely with other reported statistics. The drop from 11.2 per cent to 7.7 per cent with cancer in single nodules reflects the frequence with greater accuracy since the latter group is an unselected consecutive series of patients.

Non-Toxic Nodular Goiter
1949-1953

	Total Patients	Cancer First Found by Pathologist	Per Cent
Single Nodule	347	27	7.7
Multiple Nodules	486	12	2.4
Subtotal	833	39	4.5
Cancer Diagnosed Clinically and Pathologically	10	10	100.
Total	843	49	5.8

Table 1.—Frequence of cancer in a consecutive series of patients with non-toxic nodular goiter.

What do these figures mean in terms of the patient who enters your office because of nodular goiter, or in whom you discover such a lesion on routine examination? The answer to this question must be based upon your knowledge and experience with nodular goiter, and it should include an accurate appraisal of the comparative risks involved. One must consider the risk of operation as opposed to the danger of allowing the patient to retain a nodule in the neck. You should know the mortality and morbidity statistics of the surgeons in your area. Many well trained surgeons perform excellent thyroidectomies, but technical skill must also be accompanied by mortality rates limited to rare and unpredictable catastrophies such as cardio-vascular or cerebral vascular accidents. Their morbidity should be less than one per cent.

Although among the patients with nodular goiter in this report there were no post-operative deaths, during the same five year period the author performed a total of 1,578 thyroidectomies for all types of goiter in all age groups. There was but one death and that due to a cerebral hemorrhage. The relative risks then are easy to compute: One chance in 20 of finding cancer in a non-toxic nodular goiter; one chance in 1,500 of dying during the hospitalization for the operation. These odds should be of assistance in deciding upon a course of action. They may be useful in making your choice of answer to the question, "What shall I tell this patient with this nodular goiter?"

If you depend only on the literature to help find your answer, you could become quite confused. The literature is difficult to interpret because articles which indicate that thyroid cancer is a rare disease are opposed by reports indicating cancer in 24 per cent of excised single non-toxic nodular goiters. Sokal[3] has attempted to use published statistics of others to show that per million people there are only 25 thyroid cancers with one new malignant neoplasm developing each month within this unit of population. Even this manipulation of figures results in more than 2000 patients who suffer from thyroid cancer in our country each year. Sokal[4] in another

article concludes that "Thyroid cancer arises more frequently in toxic than in non-toxic glands". This statement is in conflict with that of Pemberton and Black[5] who found cancer in less than one per cent of toxic nodular goiters and in less than 0.5 per cent in hyperplastic glands. Sokal's report is not at all in line with the experiences at the Albany Hospital. In the 255 toxic nodular goiters of this report no cancer was found and only once has the author found cancer in a hyperplastic gland in more than 20 years of a practice devoted exclusively to thyroid surgery.

Of course, malignant lesions in the thyroid are not common in the general population. But, we are not primarily concerned with incidence, we are interested in the frequence with which cancer may be found in those people who consult us with nodules in their thyroid glands. It is not a pertinent criticism to say that statistics based upon surgically excised tissue reflect a screened segment of population. Some selective force has been at work every time any patient consults a physician. As physicians, we are obligated to those patients who seek our advice. We cannot corral large segments of the population to authenticate statistics and very few practicing doctors have time to project statistics just to give questionable estimates on the population at large. Even so, as a profession we are approaching this type of study of large numbers of people through our promotion of health examinations, of the use of diagnostic or tumor clinic facilities and similar large scale population studies. As the medical profession creates and promotes such preventive measures, it must also promulgate a consistent attitude toward potentially serious lesions. It is absurd to advise biopsy for a breast tumor and literally, with the same breath, recommend that a patient neglect a thyroid tumor "Until it bothers you". The time may come when the danger of keeping such tumors will approach or equal the risks of surgical excision. As these percentages approach one another, new standards will have to be created, but by that time let us hope the diagnostic, therapeutic and preventive techniques will have been perfected to the point that all argument is eliminated. As long as the risk of cancer greatly exceeds the risk of surgery, conscientious physicians have no choice but to advise excision for nodular goiter.

Cosmetic appearance has been mentioned as a reason why patients seek medical advice for goiter. Among the 833 patients with non-toxic nodular goiters in this study, 614 or 73 per cent had noted or complained about the neck swelling. Thirty-four per cent or 286 patients of the total group were found to have mechanical or obstructive symptoms. This figure more accurately reflects the number of patients who suffer because of the size and position of their goiters.

Another possible alteration in physiology that can result from goiter is the development of toxic symptoms. It is well known that toxic nodular goiter has a tendency to produce cardiovascular symptoms out of proportion to the manifestations usually considered when entertaining the diagnosis of hyperthyroidism. During the years of this study, 255 patients, 23.2 per cent of all the nodular goiters, were operated upon with the diagnosis of toxic nodular goiter. At the time they were first examined by the author, 25 or 9.8 per cent had already developed cardiac decompensation and or auricular fibrillation. The damage so produced in even a few patients would have been avoided by removal of the goiter while it was still in the relatively innocuous non-toxic state.

Thirty-four per cent of this series of non-toxic nodular goiters consulted a surgeon because of mechanical symptoms; five per cent were proven to have cancer. Twenty-three per cent of all nodular goiters exhibited toxic manifestations and nearly ten per cent of the toxic group had serious cardiac problems. It seems evident that nearly two-thirds of all patients, who possess a nodular goiter, have or will develop symptoms that lead them to consult a doctor. Cosmetic desires are not included in this computation. When the result of procrastination is an almost 2 to 1 chance that symptoms will develop, why wait until the risks are high before suggesting surgery? When a nodular goiter is discovered early in its development, can you select the one that will never cause trouble? The real answer to the significance of nodular goiter lies in your own personal reply to the question, "Would I permit this nodule to remain, if it were in my neck?"

Bibliography

1. Hinton, J. W., and Lord, J. W., Jr.: Is Surgery Indicated in all Cases of Nodular Goiter, Toxic and Non-Toxic, J.A.M.A., 129: 605, Oct. 27, 1945.
2. McClintock, J. C., and Farrell, J. J.: The Relation of Single Nodules to Cancer of the Thyroid Gland, New York State J. M., 49: 516, March 1, 1949.
3. Sokal, J. E.: Occurrence of Thyroid Cancer, New England J. M., 249: 393, Sept. 3, 1953.
4. *Idem.*: Incidence of Malignancy in Toxic and Non-Toxic Nodular Goiter, J.A.M.A., 154: 1321, April 17, 1954.
5. Pemberton, J. deJ., and Black, B. M.: Cancer of the Thyroid, American Cancer Society Monograph, 1954, p. 11.

Union Welfare Funds and the Doctors

WILLIAM A. SAWYER, M.D.
Rochester, New York

TWO years ago, before I became Medical Consultant to the International Association of Machinists, union welfare funds meant very little to me. I had never had any experience with unions and had done very little reading on the subject. Assuming that most doctors have only a passing acquaintance with such matters, I shall begin my discussion by being quite elementary.

First of all, what is meant by the term "union welfare funds"? We hear a good deal about them these days. They are funds which are devoted to the health and welfare needs of labor union members. This money is either contributed by employers or deducted from the members' pay-checks or contributed voluntarily by individual members, or it may come from a combination of these sources. The money so obtained may be paid into a formal trust fund, which handles its distribution, or in less formal arrangements the money may simply be paid by the parties to an insurance company, a Blue Cross office, or a health center, as it is collected, to purchase insurance or health services.

The term "*union* welfare funds" is somewhat a misnomer, because when these funds are obtained through collective bargaining, management has by law an equal voice in their administration. There are countless numbers of funds in operation, varying from small local affairs to those which affect certain workers in many parts of the country and have millions of dollars to spend.

At this point, I think it is fair to ask why labor has become interested in setting up these health and welfare funds? I suppose the usual answer is that the increasing cost of medical care, the advent of prepaid hospital care which showed how such costs can be spread, and the opportunity under wartime wage stabilization of getting employers to pay for such benefits, have all stimulated the development of welfare plans. Probably a combination of these things has brought the matter to our front pages in recent years, but in the interest of accuracy it should be pointed out that the working people of this country were concerned about paying the costs of illness long before the American labor movement existed. The push for welfare funds is not just an artificial creation of union leaders—in fact, quite the contrary. Many of today's unions had their start in mutual benefit associations formed among workers to mitigate the expense of illness and funerals.

I regret I do not have time today to sketch in the complete historical background for you. The extremely rapid growth of union welfare plans in the past few years does make us think of this as an entirely new development, but actually it has many roots going back well before our time. The forces which have encouraged this growth could so easily have culminated in national health legislation also, and labor did help to sponsor it. Most union leaders are still calling for its passage. How seriously it will be pushed, to my mind, depends upon how successful union welfare plans are, and to what extent doctors participate in their development.

Let's spend a few minutes thinking about what we mean when we speak of "success" for union welfare plans.

Perhaps the first measure of success for a union negotiator would be the number of workers who have some degree of protection, and the amount of money that employers have agreed to contribute. Probably the unions will not be satisfied until at least all organized labor shares in the protection of welfare plans and until each employer is contributing a reasonable amount toward such plans. Of course, what the 17,000,000 union members have is usually granted to the non-union workers eventually, so that fairly complete coverage of the working population may be expected some time in the future. This is something to be determined around the bargaining tables by the parties concerned. It is not a problem of the doctors.

As to just how many persons are covered by welfare plans at the present time, it is one of those fields where the statistics have not caught up with the facts. In most of the leading labor markets half or more of all the workers have some health insurance. In some areas and some industries there is practically complete coverage. Obviously it won't be too long before we approach the saturation point as far as the number of workers having some form of health

Presented at the First Interstate Scientific Assembly of the Medical Society of the District of Columbia and The Medical Society of Virginia, Washington, D. C., November 1, 1954.

insurance is concerned, and then the most limited goal of welfare plans will have been attained, that is, to cover everyone to some extent.

Another factor in the success of welfare plans is the degree of protection they offer. Most unions which have secured protection are continually trying to improve it. Most of them purchase insurance-type benefits either from commercial insurance companies or Blue Cross and Blue Shield groups. The simplest and least costly plan is group health insurance in a package form, with as much coverage as the funds will permit. A complete package would meet many needs and might include: (1) life insurance; (One labor leader says this is not health insurance in the strictest sense and should not be included, but it is in most of them.) (2) accident, death and dismemberment benefits; (3) sick leave insurance, to maintain income during temporary disability; (4) permanent disability insurance; (5) hospitalization insurance, often Blue Cross; (6) surgical insurance, often Blue Shield; (7) medical care insurance, sometimes included in Blue Shield; (surgical and medical care insurance usually apply only to hospitalized persons.) (8) major medical expense insurance, for catastrophic illness. Few plans, of course, have so complete a package.

The other types of benefits in health and welfare plans are some form of so-called direct service, beyond those service features in Blue Cross and Blue Shield. What unions are hoping for is medical service for which they can pay on an insurance basis. It may be limited to diagnostic or ambulatory care, which are exemplified by the centers of the clothing workers' unions. Complete or comprehensive service is exemplified by the center of the Teamsters' Union in St. Louis, which provides office, home, and hospital care, hospitalization benefits, dental care, and drugs at wholesale prices. It is the most comprehensive plan I know of. Some 80 doctors in the community participate part time; only the Medical Director is full time. In Philadelphia about 20 A.F.L. groups have combined in a diagnostic center with a part-time staff. I mention these centers because they are two interesting new experiments, both getting along well with their County Medical Societies. Our Committee of the A.M.A. has published a report on twelve union health centers, and we are continuing to visit and report on others. Some unions have entered into agreements with community centers like the H.I.P. in New York City and the Kaiser plans on the West Coast for medical and hospital care.

So far we have evaluated the success of union welfare plans in terms of the number of workers covered and the degree of protection offered. The next step is the problem of administration—getting the most out of what has been won. Both management and labor want to see that the beneficiaries get everything possible out of the welfare plans that have been set up, and that any increase in premiums is passed along in the form of benefits, not dissipated. Perhaps the spread of union welfare plans has brought us to the verge of a time where we must think in bold terms of a total solution to our health problems.

Take the remarks of Mr. Benson Ford at the Annual Meeting of the American Hospital Association in September. He pointed out that almost half the population of Michigan has prepaid hospital and surgical care under Blue Cross and Blue Shield alone, and that Michigan industry pays part of the bill for about half the enrollment to the tune of $25 million annually. He said, "Industrial group insurance plans . . . are setting the pattern of today's and tomorrow's demands upon hospital, doctors, and insurers. Important decisions affecting all of you in the field of health are being improvised in thousands of firms all over the country. In my opinion, they are being made without any realistic understanding of what they involve. So far as I have been able to determine, there has been no answering effort by the health industry to measure the coming demand and to help organize our facilities to meet it. That, to me, spells possible trouble ahead." I wish all of you had a copy of his remarks in which he points ahead to some of the implications of what he calls "the massive intrusion of industry and organized labor into the health picture." He says, "To all appearances our health plant is not uniformly capable of handling even the present demand, with its swift-changing patterns, and there is no sustained effort to anticipate and meet any increasing demand. You get the definite impression that the ambulance is stalled at a grade crossing, and while the night express bears down upon it, the driver, the doctor, and the patient are locked in a heated discussion of socialized medicine."

As you can see, cooperation from the medical profession has become most important at this stage of the game. Cooperation in several respects is desired —the cooperation of individual doctors treating insured individuals, discussions between management, unions and the medical societies about overall aspects of the plans, and willingness of the societies to allow

doctors to experiment with various new forms of medical service. Experiments are needed right now in many communities. In addition, labor, management, and the medical profession should join in an attempt to guide the future development of these welfare plans along the most helpful channels.

What of the Future?

I have tried thus far to give you such orientation regarding health and welfare plans as time permits. Now I want to consider for a few moments what doctors can do to better understand the trends, and how they can cooperate in shaping their development. Many union leaders believe that organized medicine has been unwilling to admit that better service for a greater number is needed, or that consumer groups have any constructive ideas concerning better medical care. I know of but one union that believes organized medicine is really interested in helping them find better forms of medical service. This union is the United Mine Workers, and a few years ago they too had nothing but harsh words for organized medicine. What has changed their attitude?

Dr. Warren F. Draper, the Fund's Executive Medical Officer, and I happen to be members of the A.M.A.'s Committee on Medical Care for Industrial Workers. He asked our Committee if we couldn't help him on some problems confronting the Fund. Medical service in the coal regions has not been what it should be. After presenting some unpleasant facts to our Committee, which in turn presented them to the Council on Medical Service and the Council on Industrial Health of the A.M.A., it was decided that first of all our Committee should make a survey to verify the facts presented by Dr. Draper, and then present them to each State Society with the hope that they would take some action. I presume you know that the A.M.A. has no authority to control medical practice in any state. Such responsibility rests solely with each State Society. Two years ago this fall a first conference with officers and liaison committees of the five State Societies involved was held. Facts were laid on the table, and each side spoke its mind. Some recommendations were made, and there seemed to be hope for the future. Two other conferences have been held with encouraging results. Members of State Societies were not agreed on every point with the Fund program, but they showed a willingness to cooperate and a better understanding of the problems involved. The Tennessee Medical Association, through its Tennessee Foundation, has already provided facilities and medical service in two neglected rural areas. This points the way for other efforts by organized medicine. Today the attitude of the United Mine Workers toward organized medicine is greatly different from what it was in 1952. The union is now pleased to be working with the doctors on such a harmonious and cooperative basis.

As one who has had the opportunity to see something of the points of view of both management and labor, and having watched and participated in these conferences between the U.M.W. and the five state medical societies, I am convinced it is a good and safe way to understand each other and to make genuine progress. Please understand that I am not expecting that everyone is in complete agreement, but there is at least a willingness on the part of the majority to go along with these new developments. Isn't that what we want? If everyone will agree to work together in these changes, what is best will prevail in time, what is undesirable will fail, and we will have the satisfaction of knowing we have not hindered experiments.

Perhaps there is more than one way to accomplish what workers, unions, and doctors want. Many paths may lead to the same goal. Dependable high quality medical service is the real fundamental essential, in whatever form medical service may be supplied.

We know that unions are seeking more complete medical care for the workingman's family. They want a reasonably complete prepaid program. Insurance indemnity is helpful, but it is only an economic answer to the need, as I see it. People want service, freedom to drop into the doctor's office or a center dispensary and ask questions about the simplest and most trivial matters. They want the comfort of having a source of information and service to lean on. I have seen the value of this over the years, in my industrial experience. Answering questions about a myriad of symptoms and changes in function means more than we may realize. Furthermore, this form of early diagnosis and treatment very often avoids the necessity of more prolonged care in the hospital. This is the very essence of true prevention and the strongest feature of a health center, which has been dubbed by an industrial doctor friend of mine as a "service station".

The more unions understand exactly what is possible and what their health and welfare funds will buy, the more formidable they will become as bargainers. Such bargaining may involve change, and changes sometimes hurt. The less radical it is, the

less hurt. Perhaps medical societies, by bargaining freely and sincerely, can help shape and direct these changes. There are a few instances where medical societies have done this with some prospect of success.

In Los Angeles many unions together are conscientiously studying by committees the various proglems of medical care. They have been able to sit down with the County Medical Society and discuss their desires. With the leadership of the Institute of Industrial Relations of the University of California, periodic meetings between the doctors and the union representatives have been held for some time, discussing panels of doctors for health plans, fee schedules, education of union members in use of health insurance plans, how plans can be improved, and the setting up of a central office for assisting participating unions in dealing with problems of medical costs.

The President of the County Society has written me as follows about their cooperative effort: "It seemed to me . . . it was not necessary to have strained relationships between medicine and labor, providing the doctors were willing . . . to have a heart to heart talk with the leaders of the labor movement in regard to health planning." He recommended that in the beginning only a few be included in the conversations. Doctors must be warned against becoming offended when somebody raises a touchy problem. If a close personal relationship can be established, cooperation will be possible. This Los Angeles effort seems to me to be one of the most significant developments in our whole medical-labor front. It will bear watching and duplicating.

On the opposite side of the coin is the situation in a midwestern city where apparently the County Society refuses even to get together with representatives of a large, strong union. If they fail to cooperate in making a health insurance plan work, the union will probably attempt to build its own health center, which will doubtless be opposed by the County Society. This could lead, as it has in some places, to refusal of membership to the center's staff, with subsequent law suits and long-drawn-out wrangling. This is bad public relations for each side.

The situation in this city appears to be one of those too frequent instances where organized labor and organized medicine are standing pat on their cliches rather than trying to work together. Sometimes the attitudes on either side seem to be so stereotyped that neither can appraise the other realistically and objectively. Yet events are inexorably bringing labor and medicine closer to interaction. We can all see it coming. Let us hope the interaction will be fruitful and cooperative. There are hopeful signs that segments of both groups are trying to find out about the other's problems and viewpoints. Today I have tried to show you why I believe that both labor and the doctors should welcome every opportunity to get acquainted with each other, size up their common problems, and look ahead to their solution. If we are in a period of great changes, and who will deny this, can we not try to understand each other's differences through negotiating, always remembering that by a consideration of all the facts, there will more likely be found a solution.

Since 1900 tremendous changes have taken place in our country. Frederick Lewis Allen has sketched the incredible transformation which has taken place in his book—The Big Change. He felt that the American people had developed a fairly typical and very satisfactory way of adjusting to those changes, and I'd like to quote him: "They discovered that you got along much better when people of all sorts and conditions worked together for what seemed to them the benefit of all . . . that when you found something amiss with the way things functioned, you examined what was happening and pragmatically made the necessary changes and no more. That the people who thought the machine would stop dead if you tinkered with it were wrong, and the people who thought you could invent out of hand a new machine that wouldn't knock somewhere were also wrong. The American Citizenry saw the benefits of continual, cooperative, experimental, untheoretical change."

In my opinion the medical profession is being challenged today by far-reaching events, events which need their professional leadership, and I hope that as doctors we will have the wisdom to rise to the occasion.

1001 Penfield Road.

Chlorpromazine in the Management of Nausea and Vomiting

JOSE M. TORRES DEL TORO, M.D.
HORACE A. ALBERTSON, M.D.
Roanoke, Virginia

ALTHOUGH nausea and vomiting are very common, little has been learned about the mechanism and treatment of these complex and annoying symptoms. Recently in the laboratories of Rhone-Poulenc in France a new drug was synthesized. It is known as Rhone-Poulenc 4560. Clinically, it is a chlorinated phenothiazine (10-dimethylaminopropyl-2-chlorophenothiazine hydrochloride) known also as chlorpromazine. The drug used in this study has been supplied by Smith, Kline and French Laboratories, its trade name being "Thorazine". Structurally it is related to the antihistaminic phenergan.

Friend and Cummins[1], quoting Courvoisier and Fournel, state that the new drug exhibits diverse pharmacological activities that have been termed "ganglioplegic", among which is the ability to block the emetic effect of apomorphine in animals. This immediately suggested that it might be a highly useful antiemetic drug.

The antiemetic properties of the compound have been extensively studied by several authors, among them being Friend[1], Knight[2], and Kent[3]. All report that the drug was shown to be very effective in suppressing severe nausea and vomiting due to a wide variety of causes, such as carcinomatosis, uremia, pregnancy, broad spectorum antibiotics, morphine and digitalis intoxication, and post-operative conditions. They also concluded that chlorpromazine acts without inducing prohibitive side-effects and is relatively nontoxic. Since the primary scope of this investigation was the study of chlorpromazine as an antiemetic agent, properties such as its psychomotor depressant action and its synergistic action with analgesic drugs were not included in this paper.

Material and Method

Seventy patients, ranging from eleven to eighty-seven years of age, were studied. The majority were hospitalized with only eight being followed as outpatients. Forty-eight were surgical cases and eighteen had medical problems. Six were on nitrogen mustard therapy. The dosage utilized varied from 25 to 50 mg., depending upon the severity of the cases, and was repeated, if necessary, at intervals of from 4 to 6 hours. Because many of the patients were vomiting and could not retain oral medication, chlorpromazine was given by the parenteral route. Among the conditions responsible for nausea and vomiting were anesthesia, acute renal failure, viral encephalitis, diverse malignancies, acute gastroenteritis, diabetes mellitus, acute pancreatitis, Meniere's syndrome, myocardial infarction, digitalis intoxication, uremia, and roentgen therapy. In some instances the patients were not given chlorpromazine for 18 to 24 hours post-operatively so that we could be reasonably certain that the symptoms were not transient in nature.

During the administration of chlorpromazine therapy, depressants, such as barbiturates and narcotics, were withdrawn or reduced in dosage. All patients were kept recumbent for at least one-half hour after an injection to offset any hypotensive effects that might develop. Ambulatory patients were cautioned that they might become drowsy, and, if so, not to undertake any activity requiring alertness.

Results

The effects of chlorpromazine are shown in the Table I. The results are classified as good when chlorpromazine produced complete relief of the symptoms, fair when it produced amelioration of the same but not complete disappearance, and none when the nausea and vomiting were not relieved. It can be seen that good effects were obtained in the great majority of the cases. There were only a few cases in which the compound was ineffective.

Table I

Response of 70 Patients to Chlorpromazine Used as an Antiemetic

Results	Number of Patients	Percentage of Patients
Good	55	78.6
Fair	5	7.1
None	10	14.3
Total	70	100

Although an increase in dosage was necessary in a few cases, nausea and vomiting usually subsided

Received for publication, January 28, 1955.

within one to two hours after the first dose. In many instances the results were dramatic. A number of the patients who vomited 18 to 24 hours post-operatively when not given chlorpromazine responded to a single injection of 25 to 50 mg. of the drug. Chlorpromazine has been used six times in association with nitrogen mustard therapy. On four occasions the results were good in preventing the nausea and vomiting almost uniformly associated with this therapy. In two cases the drug was found to be ineffective. The use of the drug in these cases and the results obtained are similar to those found by Friend and Cummins[1].

Among the side effects that we noticed in our patients was drowsiness. This was present in almost all of the cases, but was never so severe as to necessitate discontinuance of the drug. In several instances a sense of well-being was present. In two patients we could notice a slight tachycardia without hypertension or palpitation. No dryness of the mouth was observed in any case. No case of jaundice was observed.

As it can be seen by the examination of the literature our results are similar to the observations of others. We can say with Kent, Knight, and Morris[3] that Chlorpromazine has "A powerful selective effect against nausea and vomiting without inducing prohibitive side effects".

Representative Case Reports

Case I: J. S. T., 42 year old white male patient was first found to have Hodgkin's disease in 1949. At that time there was no systemic reaction and the only site of involvement was a node in the left inguinal region. This was removed surgically followed by x-ray therapy to the node-bearing area. He was symptom free and there were no recurrences until the summer of 1953 when a node appeared in the right inguinal region. This, too, was excised and followed by x-ray therapy. He did well for several months and then there was a recurrence of the lump. He was treated by x-ray and improved. Since then recurrences have been more frequent and systemic reaction more severe, but he has thus far never failed to respond to x-ray therapy. In January, of 1954, a follow-up chest plate was entirely negative. In the latter part of February, after a relatively long symptom free period, he became suddenly very weak, developed a high fever with persistent cough and x-ray revealed extensive bilateral pulmonary involvement. A tender angle node appeared in the neck on the left and clusters of nodes in both groins. Laboratory examination on 3-12-54 revealed: RBC—4,840,000, WBC—5,500, Hg.—90%, 13.05 gms. Urinalysis: Negative. Treatment: Nitrogen mustard followed by x-ray to the left groin. The first dose of nitrogen mustard was 7.6 mg. I.V. After a half hour the patient developed nausea and vomited profusely. The patient refused more therapy if he had to be that sick. Fifty mg. of Thorazine was then given orally 15 minutes prior to the nitrogen mustard therapy on two subsequent occasions. The patients did not develop nausea or vomiting any more and was discharged on 3-20-54.

Case II: T. R. W., Jr., 46 year old white male who was admitted to the hospital complaining of gallbladder colic, with occasional vomiting and abdominal distention. On 3-26-54, a cholecystectomy was performed with exploration of the common bile duct. Also a biopsy of the liver was performed. The pathological diagnoses were as follows: Chronic fibrosing cholangitis, chronic fibrosing cholecystitis, bile pigmentation of liver, chronic inflammation of ampulla of Vater. In his early post-anesthetic period the patient developed nausea and vomiting. Fifty mg. of Dramamine was given and after two hours the patient was still vomiting. Twenty-five mg. of Thorazine was administered. After the first dose of Thorazine the nausea and vomiting ceased and further administration of the drug was not necessary. The patient had an otherwise uneventful post-operative course.

Case III: L. P. B. This 40 year old white female patient was admitted to the hospital on the neurosurgical service on 3-25-54 with a ruptured intervertebral disc at L-4. On 3-26-54, a left hemilaminectomy was performed by Dr. Edgar Weaver, and the herniated disc was removed. On the day after operation the patient had severe nausea and vomited several times; a single dose of 25 mg. of Thorazine intramuscularly was given. After one hour the symptoms disappeared completely. The patient had an otherwise uneventful post-operative course and was discharged on 4-3-54.

Summary

Seventy patients, suffering from nausea and vomiting caused by a wide variety of conditions, were treated in a clinical study, using chlorpromazine as an antiemetic agent. Good results were obtained in 78.6% of the patients with the parenteral route of administration being used in most cases.

Although the only side effect produced by chlor-

promazine in this study was drowsiness, the following precautions should be observed when administering the drug: Depressants should be withdrawn or reduced in dosage; patients should be kept recumbent for at least one-half hour after an injection to avoid possible hypotensive effects; and ambulatory patients should be cautioned against drowsiness. Our results substantiate those found by other authors.

We feel that chlorpromazine is a very powerful drug for the control of nausea and vomiting without prohibitive side effects.

ADDENDUM

Recently Loftus et al[4] have stated that they have observed fourteen cases of jaundice following Chlorpromazine therapy. We have not encountered jaundice in the use of this drug but we feel this danger should be kept in mind and we do not recommend the use of this drug in patients with pre-existing liver disease. We strongly recommend that the drug be discontinued if jaundice appears.

BIBLIOGRAPHY

1. Friend, D. G., and Cummins, J. F.: New Antiemetic Drug; Preliminary Report, J.A.M.A. 153: 480 (Oct. 3) 1953.
2. Knight, R. W., Kent, B., Morris, G.: Clinical Studies of an Antiemetic Agent, Chlorpromazine. J. Lab. & Clin. Med., 828—42-5: (Nov.) 1953.
3. Kent, B., Knight, R., Morris, G., Dizon, M., and Moyer, J.: Clinical Observations on The Use of Chlorpromazine (SKF-2601A) as an Antiemetic Agent. Medical Record & Annals, Houston Vol. XLVIII, No. I: 758-761 (Jan.) 1954.
4. Loftus, L. R., Huizenga, K. A., Stauffer, M. H., Rome, H. P., and Cain, J. C.: Jaundice Cause by Chlorpromazine (Thorazine). J.A.M.A. 157: 1286 (April 9) 1955.

Jefferson Hospital.

New Drug in Rheumatic Diseases.

Preliminary trial of a new drug, prednisone, indicated it may be "four to five times more potent" than two other compounds now used to relieve pain and other symptoms of rheumatic diseases. Drs. Jack R. Dordick and Edward J. Gluck, Beth Israel Hospital, New York, described use of the drug in a small group of patients, in the May 21st Journal of the American Medical Association.

These first results show the new hormone compound may have distinct advantages in treating patients with joint pain, tenderness, stiffness, and inflammation from rheumatoid arthritis, and patients with rheumatic heart disease or gout. Prednisone (Meticorten) appeared to have fewer side-effects than cortisone compounds, which have been used for these diseases. The physicians treated 15 patients, including 12 with rheumatoid arthritis. All of them previously had received numerous other kinds of treatment with only slight relief. Within one day, the arthritis patients, after taking prednisone, reported disappearance of pain and lessening of stiffness. In a few days muscle pain and stiffness disappeared, and patients were able to walk, dress, and feed themselves with little or no pain. Seven of the 12 showed improvement in walking. When prednisone therapy was stopped, symptoms returned and in most patients were as severe as before treatment. Improvement returned when treatment was resumed.

Side-effects of the drug were not serious and did not interfere with treatment except in one case. The physicians pointed out that the side-effects might be potential hazards and further studies of the drug may disclose limitations. However, they said they feel it is a valuable agent for treatment in these diseases.

Sponge Rubber Boot.

Two New York state physicians have developed a zippered sponge rubber boot to relieve severe varicose veins of the lower leg. Drs. Walter G. Gasner, Mt. Vernon, N. Y. and Maurice J. Costello, New York City, report initial results with the innovation in the May 21st Journal of the American Medical Association.

In two women, severe varicose infections healed with a month's wearing of the boot. It healed a painful quarter-size varicose ulcer, present for five years on the leg of a 55-year-old woman. A three-year-old varicose skin eruption on the legs of a 52-year-old woman also healed, enabling her to walk without difficulty. Swelling in the legs also disappeared.

The boot is made of sponge rubber a quarter-inch thick, which is placed around the leg and pencil-marked to fit. The rubber then is cut out with a razor blade, and edges closed with adhesive tape and a zipper. A "horse track" bandage is wrapped around the boot after it is put on, for additional support. The action of the leg muscles against the sponge rubber causes a "pump-like" action while walking.

Immediate and Early Physiological Reaction to Surgery

L. G. RICHARDS, JR., M.D.
Lynchburg, Virginia

INTRODUCTION: A great deal is appearing in the surgical literature regarding the metabolic alterations that occur as a result of the trauma of surgery. This research is being carried on in animal laboratories and on humans in the metabolic surgical wards of many of the larger medical centers. Advances in this field have been rapid in recent years. The importance of an understanding of the physiological alterations brought about by surgical trauma has long been recognized. However, this phase of surgery has lagged behind as compared to progress in the technical aspects of surgery. It is now clear that further progress in the field of surgery is predominately dependent upon advances in our understanding of surgical physiology. This is not to say that the technical aspects of surgery are any less important than in the past. Improvement in the principles of operative surgery offers an ever present challenge; that this challenge continues to be answered is exemplified by such recent contributions as the Allison technique for repair of esophageal hiatus hernia which affords excellent results in vast majority of cases, Bailey's development of the procedure of mitral commissurotomy as unequivocably the procedure of choice for correction of mitral stenosis, the continued efforts to improve the results of gastric resection by reexamining the value of the Bilroth I type as compared to the Bilroth II, even though in the latter procedure, in elective cases, the mortality rate is less than 2% and the end results in terms of patient satisfaction are better than 90%. We can now operate electively on any part of the human organism. Cardiotomies are being performed in some medical centers, a cardioscope has been developed. Symbolic of the vital importance of surgical physiology is the fact that continued advance in heart surgery is wholly dependent upon refinement of such adjuncts as controlled hypothermia, so-called hypotensive anesthesia and ultimately the development of an effective and practical heart-lung by-pass.

Surgical physiology as referred to in this paper is essentially the physiology of stress; the stress reaction is certainly not limited to the field of surgery; it constitutes a common denominator for all fields of medical practice. However, the stress of surgical operation is most often a scheduled event so that it affords an opportunity for planned investigation of the metabolic response. By virtue of this situation, this work constitutes a contribution to all other fields of medical practice wherein the occurrence of stress is most often not predictable. The purpose of this paper is to present an outline of the observable physiological changes that occur during and following a surgical operation, to indicate the activating factors responsible for these physiological changes, to briefly correlate this with clinical management of the patient and, finally, to mention some of the more common conditions or situations which modify this normal response. In preparing a review of this kind, one is faced with the problem of sorting out the verified and accepted concepts from those which are still strictly in the theoretical stage. The method used in this sorting out process is admittedly abstract: consideration is given of course to the authority of the source of the various reports, their acceptance by others working in this field of research, and, finally, the rewarding experience of applying these accepted concepts in practice. A glance at the bibliography will indicate that the work of Dr. F. D. Moore (Moseley Professor of Surgery, Harvard University) has had an almost over-riding influence on this review; this should not in any way detract from the valuable specific contribution of others represented.

Received for publication, December 9, 1954.

The Normal Response

The changes which have been observed constituting the normal reaction to surgery may be listed as follows:

1. Negative nitrogen, potassium and caloric balance.
2. Positive sodium balance.
3. Decrease in circulating eosinophils.
4. Transient fever.
5. Hypermetabolism.
6. Transient oliguria.
7. Transient adynamic ileus.
8. Hyperglycemia.
9. Increased pulse rate.
10. Narrowed pulse pressure.
11. Decreased blood volume.

This list is not intended to be all inclusive; it does

serve as a basis for a working knowledge of the stress reaction.

The word balance is here used to indicate a net gain or loss of the substance in question.[12] Positive balance means the patient is gaining or accumulating an excess of the substance in question, so that the total quantity contained becomes greater than average. Negative balance means aggregate loss so that the total quantity becomes less than average. A normal adult who is not gaining or losing weight is in zero balance as regards nitrogen, potassium and sodium and calories. Nitrogen excreted is equal to that taken in the form of protein in his diet. Tissue synthesis and destruction are equal so that nitrogen intake (in the form of protein) and nitrogen excretion (via feces and urine) are essentially equal on a daily or weekly average. Increased nitrogen excretion unaccounted for by increased protein intake represents increased tissue breakdown, a state of negative nitrogen balance. Quite obviously in the immediate post-operative state there will be a negative nitrogen balance, since the patient is not eating anything, so that any nitrogen that is excreted represents a net loss. However, the urinary nitrogen is increased in the post-operative phase above that which has been normal on a basal diet before surgery. Trauma induces an increased catabolism measurable indirectly by the increased urinary nitrogen. The negative potassium balance is in part related to increased tissue destruction being thereby released from its predominantly intracellular position. There is, however, a selective migration of the potassium ion across the cell membrane to the interstitial fluid segment and on to the intravascular compartment. This potassium release has been shown to be of a magnitude unaccounted for in its entirety by the amount of tissue destruction.[12] The kidneys at this time have no means of conserving potassium, so that, as a result of the increased serum potassium, there is an increased urinary potassium and a negative potassium balance. Secondary to the exit of potassium from the cell, sodium moves in. Moore has called this the sodium shift. At the same time there is increased renal tubular resorption of sodium so that the net effect is virtually complete sodium retention. This is referred to here as positive sodium balance. Strictly speaking, this is not actually positive balance unless sodium is being added to the patient in form of sodium chloride solution intravenously during this phase of sodium retention. This exchange of positions of the sodium and potassium ions has been labeled by Moore as the "electrolyte inversion phenomenon". This much of the reaction is represented graphically in Figure 1. It is seen that there is an opposite change of balance of potassium and sodium and at the same time negative nitrogen balance persists until the electrolyte changes have returned to zero balance. Caloric balance accompanies nitrogen balance. The duration of these changes, in the normal response, is dependent upon the intensity and duration of stress or trauma that has occurred. Following simple cholecystectomy, this change in balance can be expected to continue for three to five days. The decrease in the circulating eosinophils follows approximately the same curve as potassium with an increase to above normal for a brief period just before returning to normal. This increase to above normal eosinophil count has been called the "backswing over-shoot".[8] Of the other changes listed, very little need be said about them at this point except to re-state that they do occur. A fever of one to one and a half degrees following surgery is normal

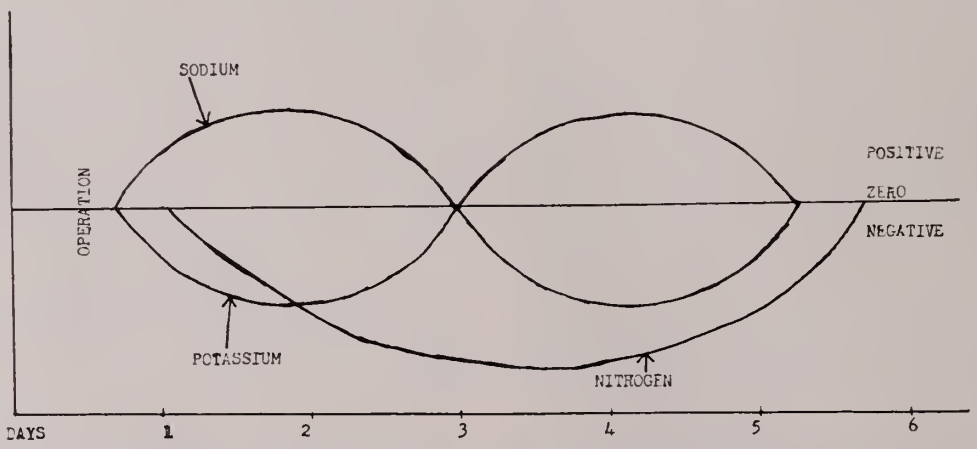


Fig. 1.—Intended as a graphic illustration of balance changes which might be expected to occur following uncomplicated operation of the magnitude of simple cholecystectomy. It is not precise as there is fair degree of the normal reaction. Merely a method of visualizing the changes that occur.

for 12 to 72 hours but will not be observed unless the temperature is taken carefully by rectum.[8] Decreased urinary output usually lasts one to three days, and is then followed by temporary diuresis before returning to normal. This diuresis represents a return of sodium from the intracellular compartment, excess tubular resorption of sodium ceases, and marked increase in urinary sodium. The increased urine volume is principally the water accompanying sodium and it may be spoken of as sodium diuresis. There is an increase in the metabolic rate, increased pulse rate, narrowing of the pulse pressure, temporary hyperglycemia and temporary absence of normal peristalsis.

The Activating Factors: The mechanism of these various alterations which have been listed is of primary interest. What causes these things to happen? What are the activating factors which are set in play by the occurrence of stress. The answer is far from complete, but enough has now been discovered so that a general picture is beginning to come into focus. The pituitary, thyroid and adrenal glands dominate the picture. The discovery of the inter-action of the pituitary and the adrenal gland in response to stress has, of course, been one of the fundamental advances (Fig. 2). The initial event

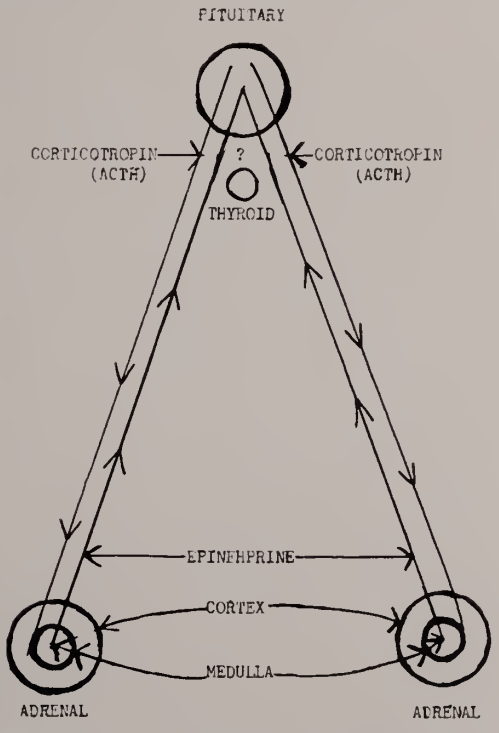


Fig. 2.—Epinephrine stimulation of the anterior pituitary is mediated through the hypothalamus which has been omitted in this scheme.

following trauma is the liberation of epinephrine by the medullary portion of the adrenal gland; this excess epinephrine in the circulation stimulates the anterior pituitary *via* the hypothalamus to secrete increased amounts of adrenal corticotropin hormone, which, in turn, activates the adrenal cortex to release increased amount of cortical steroid complex. This basic mechanism has been substantiated and accepted. This liberation of adrenal corticoids, which is principally cortisone, explains many of the above listed reactions to surgical trauma. Administration of cortisone or adrenal corticotropin hormone (ACTH) to a normal untraumatized individual evokes the same electrolyte changes as mentioned above. Recent work[6] has indicated that the thyroid gland may be the first of the endocrines to react to the stimulus of stress, and that the adrenal cortical secretion is secondary and acts as a counter force to the increased thyroid activity. Whether this counteraction takes place centrally at the thyroid or pituitary gland or in the peripheral tissues has not been established. The most recent thoughts are that the initial phase of the stress reaction is that of hypermetabolism with accompanying negative nitrogen balance, increased pulse rate and mild fever—all probably resulting from increased thyroid activity, and that increased adrenal cortical activity represents a compensating force. Previously it had assumed that negative nitrogen balance was a manifestation primarily of increased cortical activity. It seems reasonable to assume that the negative nitrogen balance is primarily the result of hypermetabolism and the electrolyte changes are primarily under control of adrenal cortical secretions. As seen in Figure 3, the changes that occur in a normal reaction may be ascribed to the three principals involved as follows: Posterior pituitary initiates the oliguria by increased secretion of the anti-diuretic hormone and resultant increased resorption of water by distal renal tubules.[3] The thyroid gland is responsible for the hypermetabolism, increased pulse rate and the negative nitrogen balance. The adrenal cortical secretion causes eosinopenia and electrolyte inversion. Recent work by Hayes[4] has shown that the adrenal cortex has another vital function. This is concerned with the sensitization of the peripheral capillary vessels to the action of epinephrine and a resulting constriction of the peripheral vascular bed in response to acute blood loss. This is extremely interesting and important in that it supplies a missing link in our understanding of one type of the so-called low sodium syndromes, and also the mechanism of at least one form of irreversible shock. A low sodium syndrome,[10] irreversible shock and hypo-adrenalism can be and

perhaps very frequently are one and the same thing. It can be seen that inefficient cortical secretion would be responsible for excessive sodium loss via the kidneys[10] and resulting sodium depletion clinically represented by persistent hypotension, at the same time, it would account for inefficient peripheral vascular contraction in response to massive blood loss. This

ADRENOCORTICOID PHASE

POSTERIOR PITUITARY	antiduretic hormone initiates oliguria
THYROID	hypermetabolism, increased pulse rate fever negative nitrogen balance? negative caloric balance?
ADRENAL GLAND	Medulla increased pulse rate peripheral vascular constriction Cortex electrolyte inversion peripheral vascular contraction eosinopenia increased urinary steroids hyperglycemia opposes increased thyroid activity negative nitrogen and caloric balance?

Fig. 3.—First of four phases of convalescence.[8] This, the adrenocorticoid phase, terminates with the reversal of electrolyte inversion phenomenon, second phase labeled the Corticoid Withdrawal phase; third phase the Spontaneous Anabolic phase—return to positive nitrogen balance which follows return of sodium and potassium to zero balance. The fourth phase has been labeled Fat Gain phase—body fat oxidation as a source of energy occurs during first three phases; its replacement occurs now in the fourth and final stage of convalescence.

contraction of the peripheral vascular space is vital in the defensive mechanism which compensates sudden large blood volume losses. In the average adult this vascular contraction will maintain a normal blood pressure despite blood loss of up to 1200 cubic centimeters.[20] In other words, it can mask a volume deficit of over a liter of blood. To follow this on through, it is obvious that if in dealing with hemorrhagic shock the patient is transfused only until a normal blood pressure is attained, the patient still will have a blood volume deficit of up to 1200 cubic centimeters, so that this defensive mechanism, vitally dependent on increased cortical secretion, must remain in force. The patient is in a precarious state. A recurring hemorrhage of only 300 to 500 cubic centimeters will drop the blood pressure to shock or near shock levels; equal replacement of blood by transfusion at that time will restore the blood pressure if the adrenal cortices have not been exhausted and are still able to support the persisting volume deficiency. If the adrenal cortices have become exhausted, and they will if this state of acute volume depletion persists long enough, then peripheral vascular collapse ensues and no amount of blood will restore the blood pressure. This is at least one form of irreversible shock. Now we know, of course, that intravenous hydrocortisone may restore the peripheral vascular tone and may be life-saving in those instances of hemorrhagic shock which do not respond to whole blood transfusion.

The reduction in circulating eosinophils is a result of increased adrenal cortical secretion. This affords one means of assessing adrenal cortical function. Epinephrine administered parenterally will stimulate the pituitary to secrete corticotropin which in turn stimulates the adrenal cortices to secrete increased amounts of cortical steroids. Following this, a decreased eosinophil count will be seen as well as an increase in the amount of adrenal corticoids in the urine. It is at least grossly indicative of the ability of the pituitary and adrenal cortex to respond to stress. The ACTH (Thorn) test is on the same principal except that this test of course gives no information concerning pituitary activity. More accurate tests than these are desirable and are being sought. However, eosinophil count is a valuable and practical means of following the stress response. Cope[21] has established patterns of response concerning the eosinophil count in extensive burns; these patterns are established by repeated (serial) counts as often as every two to four hours. He has advocated intravenous cortisone therapy in those instances when the eosinophil response is grossly altered from that predicted and the clinical course of the patient is not satisfactory. The eosinophil count begins to fall just shortly before surgery begins, a clear example of emotional stress. Following major surgery it will fall to zero when there is maximal adrenal cortical activity. Later it gradually rises and there is finally a rise to above normal just before it returns to normal—the so-called backswing over-shoot.

These constitute the generally known and accepted physiological alterations following surgery. The practical value of this definition of the normal response to trauma is immediately apparent, and is discussed below in general terms without the use of formulas or arithmetical equations, milli-equivalents or milligrams per cent, since such presentation takes on many of the aspects of a cook book type of instruction on how to care for the surgical patient and are often lacking in definition of the basic concepts upon which said instructions are based. Moore speaks of this phase of the subject as corollaries, or how this influences clinical judgment in patient care.

Corollaries: The fact that these changes occur and revert to normal spontaneously, obviously dictates a do nothing attitude in the uncomplicated surgical case. Simply maintain hydration until the patient is able to take fluids and nutrition by mouth. There is no need for sodium or potassium in the intravenous fluids. He is retaining virtually all of his sodium so that sodium chloride administration is contraindicated; his potassium is moving out from the cells through the circulation and is being lost in the urine; his serum potassium is slightly above normal, as this egress continues. If he could utilize potassium, he would take it from his own elevated plasma potassium. Vigorous potassium therapy at this time is not only useless; it can be hazardous by further increasing already elevated serum potassium to toxic levels with the possibility of resulting cardiac arrest in diastole.[22] Glucose and water by venoclysis is all that is needed until he can take fluids and later nutrition by mouth. It is easily seen that serum determination of the electrolyte concentration is of no specific value at this time. At a time when the patient is losing potassium, serum potassium concentration will be above normal and it might be inferred that an excess exists; however, the excess exists only in the serum. The body store of potassium is being reduced. Likewise, a serum sodium determination may reveal less than average sodium content; the reduction exists only in the serum, the sodium having moved into the intracellular space. Sodium administration may result in sodium loading, and edema. During the phase of negative nitrogen balance, the body is unable to utilize nutrition in any form. This has been expressed as a state of nitrogen rejection. Parenteral administration of protein hydrolysates, plasma or whole blood will have no nutritive value at this time for tissue synthesis. It has been reasoned that administering such substances during this phase may, in fact, actually be harmful. It is an interesting side-light that even though the patient is in negative nitrogen balance, in a state of tissue breakdown, and even though this condition may extend beyond the normal period, wound healing is not retarded.[8] It is as if the entire organism is geared to a secondary role in support of healing and repair of the injured part. In other corollaries to be drawn from the normal response to surgery, it is obvious that one should not treat a mild fever with antibiotics in a clean surgical case; remember that a state of oliguria for twenty-four to seventy-two hours post-operatively is normal and fluid replacement should be calculated to satisfy only the demands of insensible loss. Up to this point the emphasis is on the fact that we are dealing with the normal response which embraces an essentially normal physiological state preceding surgery; the surgical procedure was accomplished without accident and no real complications developed as a result of the operation. Some have questioned the validity of considering these metabolic alterations, resulting from trauma, as normal. Patients have been subjected to a period of salt reduction to deplete the total sodium content prior to surgery in attempts to off-set or to modify whatever bad effects might result from post-operative sodium retention. Similarly, increased potassium intake has been tried before surgery, in an effort to increase the body store of potassium, the better to withstand the onslaught of potassium loss in the post-operative state. The results of this type of experimentation as of now indicates one basic fact, that you cannot improve on the normal status. The best possible situation one can attain in preparation for surgery is one of normal balance as regards water, electrolytes and nutrition. For example, one may inhibit the electrolyte inversion phenomenon by reducing the activity of the adrenal cortices. This can be done by a period of cortisone administrations. The adrenal cortices will undergo an atrophy of disuse since daily cortisone demand is being satisfied from an exogenous source. If the cortisone is stopped and the patient then submitted to a major surgical procedure, the risk of the anesthesia and operation is greatly increased. Operative deaths have been reported in such instances,[19] the patient having been on long term cortisone therapy for other reasons. In all probability along with the peripheral vascular collapse, which is probably the mechanism primarily involved in such a catastrophe, there also existed an "unchanged" electrolyte balance. The point is, as of this writing, that these changes are not complications. They constitute a normal response. In summarizing this phase of the subject, it is recommended that the patient be brought to as near a state of normalcy as possible before surgery. After surgery, barring complications, simply maintain normal hydration. Moore, offers the following quote in support of this concept: "Some of the sick, on account of their eagerness, took food on the first day; some, on account of loathing, abstained; and the disease in those who refrained, was more relieved. Some ate during a fever, some a little before it; others after it had subsided; and those who waited to the end did the best. For the same reason, some at the beginning of an illness used a full diet, others a spare,

and the former were made worse. Occurring daily, such things impressed careful men, who noted what had best helped the sick, and began to prescribe them. In this way medicine had its rise from the experience of the recovery of some, of the death of others, distinguishing the hurtful from the salutary things."—(Silliman Lectures, 1901.[12])

The chief value of defining the normal response to surgery in terms of the physiological alterations, lies in the fact that it furnishes a framework for a better understanding and handling of the abnormal response, and, working backward from there, an increasing ability to predict the abnormal response in advance of surgery. Certain things obviously stand out which can alter or inhibit the normal reaction. There is nothing essentially new in this, but this general approach affords a means of classifying patients who do not respond well to an operation. Five main categories have been delineated from this point of view.[10-12]

Abnormal Response

1. The Depletion Response: This is the response which is seen in the patient who is malnourished as a result of long chronic illness, wasting diseases such as rheumatoid arthritis, advanced malignancy, partially obstructing long standing ulcer, etc. These individuals will be found to be anemic, hypoproteinemic, have reduced blood volume, reduced sodium and postassium. He is "low" on everything. Laboratory work may or may not reveal all of these abnormalities, the true picture often being clouded by virtue of the reduced blood volume. The latter is always discernible if the means of an accurate blood volume determination is available. Even if the test is available, the history and physical examination are probably still more reliable. The reaction of this patient to surgery is characterized by a decrease in all the listed alterations and shorter duration of these changes. This patient returns much more quickly to positive nitrogen balance and is ready to receive and assimilate nutrition in any form much sooner than the normal individual. There is a much narrower margin of safety. Perhaps the most common error here is over-hydration and failure to answer the demand for nutrition with the onset of positive nitrogen balance. As to the anabolic phase,[8] one cannot always depend on a patient's desire for food as an accurate indicator as to when the physiological demand has occurred. Sometimes they must be taught to eat again; this is so especially in this group and in the aged. Sympathetic, patient and persevering nursing care is the essence of success at this point. Caloric intake should be pushed to the maximal ability of the patient to receive it, together with intensive multiple vitamin therapy to the point of ten times normal daily vitamin requirement,[8] when the phase of nitrogen rejection has terminated.

2. The Hypo-Adrenal Response: This has already been mentioned in connection with patients on long term cortisone therapy. The Thorn test or epinephrine test may indicate adrenal cortical insufficiency. Of course, disease of the adrenal glands, such as Addison's disease, would alert one to probable existence of inadequate cortical function. A normal or elevated eosinophil count in the immediate or early post-operative phase would infer hypoadrenalism. It has been emphasized, however, that the eosinophil count is not infallible as a means of assessing adrenal cortical function and that if cortical insufficiency is suspected by virtue of a prolonged post-operative hypotension unresponsive to ordinary corrective measures, one is justified in a trial administration of cortisone intravenously (50 to 100 milligrams hydrocortisone added to 500 or a 1000 cubic centimeters of glucose in water). If the patient responds and the blood pressure rises, one can safely assume that adrenal cortical insufficiency exists.[4]

3. The Excessive Response: The patient appears normal but, following surgery, undergoes a prolonged reacting phase. This is seen, of course, when the trauma has been excessive. There are others who present the excessive response when the surgical trauma has been moderate or minimal. The explanation of the latter is not clear. Unsuspected thyroid over-activity could be an explanation in some instances; one would also suspect that the emotionally unstable individual might be predisposed to such a response.

4. Extra-renal Response: This is a specific thing. It is the alteration of the normal response that results from water, protein and electrolyte loss by routes other than by the kidneys. It is occasioned by such added problems as continuous gastric suction, intestinal fistulae, inflammatory exudates (establishment of the so-called third fluid compartment). This additional loss of these elements distorts the normal reaction unless the fluid and electrolyte losses are measured and compensated by approximately equal replacement. It is here that the flame photometer would seem to have its greatest value, in daily practice, to measure the amount of electrolyte loss so that the physician is aware of the magnitude of such losses. In this situation, daily replacement of sodium is of first importance initially; potassium therapy

becomes the primary concern only after three or four days of continued fistulous or gastric suction drainage. It has been noted that in general it takes three or four days of continued gastric suction to bring a patient to the beginning of a state of potassium depletion. If gastric suction must continue after that, then potassium replacement becomes of vital importance.

5. Renal Tubular Dysfunction: The critical point here is whether or not the renal tubules are capable of normal increased sodium resorption in the post stress phase. Increased sodium resorption by the tubules is activated by increased cortical steroid secretion (desoxycorticosterone). Excessive loss of sodium in the urine is part of the complex in the hypo-adrenal response. However, for reasons as yet not clearly defined, the tubules are incapable of adequate sodium resorption when by other criteria adrenal cortical function is adequate. Obviously it is desirable to compensate excessive sodium loss through the urinary tract when it occurs.[10]

Many other categories could be mentioned, such as any complication as seen in infections, phlebitis, atelectasis, transfusion reactions with resulting lower nephron syndrome; there should be a hypo- and a hyperthyroid response, the anesthesia complication response, and so forth. These and many other possibilities may eventually be classified.

Summary and Conclusions

It has been said, "For every force in the world, there is an equal and oppositely directed force." This is seen in the normal physiological response, to trauma—in part, represented by the so-called changing balance. So long as these alterations pursue their normal course, the clinicians only specific duty is that of maintaining an approximately normal state of hydration. Predicting the abnormal response constitutes the primary challenge; having failed in this in the individual case, the primary concern becomes that of recognizing the abnormal reaction as it develops. A basic outline of the normal reaction has been presented. This basic concept should afford a point of reference for evaluation of the individual situation principally through clinical judgment. Excessive laboratory tests are not necessary, and, indeed, may be misleading. Two additions to the average hospital facilities seems indicated. One is the flame photometer, primarily to determine the quantity of renal and extra-renal electrolyte losses, so that in the abnormal response the magnitude of required electrolyte replacement can be ascertained. The other is some means of determining urinary nitrogen content, such as the microkjeldahl apparatus, so that one can determine the time of onset of nutritional demand which is not always heralded by a desire for food. These two additions can offer valuable assistance in management of the complicated case. An appreciation of the normal response to surgery is the greatest asset of all in managing the surgical patient, and enough of this response has been defined so that a moving dynamic picture is beginning to come into focus.

Bibliography

1. Beal, J. M., Cornell, G. N., and Gilder, H.: Factors Influencing Nitrogen Metabolism in Surgical Patients, Surgery, 1954, 36: 468-486.
2. Berry, R. E. L.: Clinical Aspects of Acute Peripheral Oligemia from Plasma Water and Sodium Salt Loss, Archives of Surgery, 1953, 67: 408-425.
3. Dudley, H. F., Moore, F. D., and LeQuesne, L.: Studies on Antidiuresis in Surgery, Effects of Anesthesia, Surgery and Posterior Pituitary Antidiuretic Hormone on Water Metabolism in Man, Annals of Surgery, 1954, 140: 354-367.
4. Hayes, M. A.: Shock and the Adrenocortex, Surgery, 1954, 35: 174-190.
5. Hayes, M. A., and Coller, F. A.: The Neuroendocrine Control of Water and Electrolyte Excretion During Surgical Anesthesia, Surgery, Gynecology, and Obstetrics, 1952, 95: 142-148.
6. Hayes, M. A., Goldenberg, I. S., Lutwak, L., and Rosenbaum, P. J.: Thyroid-Adrenocortical Interrelations Following Operation, Surgery, Gynecology, and Obstetrics, 1954, 98: 513-522.
7. Richards, L. G., Jr.: Potassium Metabolism, Bulletin, Saint Lukes Hospital, Bethlehem, Pennsylvania, May, 1951, 6: Nos. 1, 3-11.
8. Moore, F. D.: Bodily Changes in Surgical Convalescence, Normal Sequence-Observations and Interpretations, Annals of Surgery, 1953, 137: 289-315.
9. Moore, F. D.: Editorial—Bone Sodium, Annals of Surgery, 139: 253, 1954.
10. Moore, F. D.: The Low Sodium Syndrome of Surgery, The Journal of American Medical Association, 1954, 154: No. 5, 379-384.
11. Moore, F. D.: The Growth of Surgical Biology, Annals of Surgery, 1953, 138: 807-821.
12. Moore, F. D., and Ball, M. R.: The Metabolic Response to Surgery, Charles C. Thomas, Publisher, 1952.
13. Moore, F. D., *et al.*: Further Observations on Total Body Water, Part III, Surgery, Gynecology, and Obstetrics, 1952, 95: 155-180.
14. Moore, F. D., *et al.*: Further Observations on Total Body Water, Part I, Surgery, Gynecology and Obstetrics, 1952, 95: 1-12.
15. Moore, F. D., *et al.*: The Measurement of Exchangeable Potassium in Man By Isotope Dilution, The Journal of Clinical Investigation, 29: No. 10, 1280-1295, 1950.
16. Schlegel, J. U.: A New Approach to the Treatment of Electrolyte Disturbances in Shock and Severe Stress, Surgery, 1954, 35: 449-459.

17. Schlicke, C. P., and Berghan, F. R.: Corticotropin (ACTH) in Hyperthyroidism, Archives of Surgery, 68: 800-819.
18. Slocumb, C. H., and Lundy, J. S.: The Use and Abuse of Cortisone in Surgery, Surgical Clinics of North America, August, 1952, 1105-1107.
19. Lundy, J. S.: Cortisone Problems Involving Anesthesia, Anesthesiology, July, 1953, 14: 376.
20. Comroe, J. H.: Basic Science Lectures, Graduate School of Medicine of University of Pennsylvania, 1952.
21. Cope, O.: Ebb and Flow of Eosinophils in the Burned Patient, and Their Use in Clinical Management, Annals of Surgery, 137: 175-183, February, 1953.
22. Best and Taylor: Physiological Basis of Medical Practice, Williams and Wilkins, Publisher, Fifth Edition, p. 192.
23. Hayes, M. A.: Water-Soluble Vitamin Requirements in Surgical Convalescense, Annals of Surgery, 140: 661-667, November, 1954.

212 Langhorne Road.

Physician Licensing Reaches New High.

The number of new physicians added to the nation's physician population reached a record high in 1954, according to figures released by the American Medical Association Council on Medical Education and Hospitals.

Boards authorized to license physicians to practice gave 15,029 licenses during the year, an increase of 595 over the previous year. Excluding duplications of candidates examined in more than one state, the actual total of new license holders reached 7,917. Deducting the 3,667 physician deaths in 1954, there remained 4,250 new physicians in practice since the beginning of the year. This was 641 more physicians than were added to the population in 1953.

The council's report appeared in the May 28th Journal of the A.M.A. It said that the physician population increase occurred in 31 states. The licenses issued brought to 222,773 the total of licenses granted since 1935.

Registration of physicians (including persons licensed in 1954 who took exams in previous years) reached a level exceeded only by that of 1946, the all-time record year. From 1946 to 1952, the numbers registered decreased annually and then took an upswing. However, throughout all these years the totals were higher than in the pre-World War II years.

The report also showed that failures of candidates to pass license exams remained low. Only 4.2 per cent of the 5,999 American medical school graduates taking exams last year failed to get licenses, and 4.8 per cent of the 126 Canadians failed. The largest part of the failures occurred among graduates of foreign faculties, schools not approved by the council, and schools of osteopathy. The total failure rate of 12.7 compares to the previous low of 5.7 in 1930 and the previous high of 21.7 in 1908.

Synthetic Wetting Agent.

A synthetic wetting agent which can make a duck sink also can be a useful laxative. Drs. James L. Wilson and David G. Dickinson, Ann Arbor, reported on the unusual use of the material in the May 28th Journal of the American Medical Association.

The material, dioctyl sodium sulfosuccinate (Aerosol O.T.) was developed 15 years ago. It was shown that a small concentration of this material in water made it so "wet" that ducks in the water sank. The material's usefulness in patients suffering even severe constipation was based on its ability to mix water and fatty material and therefore dissolve hard masses.

They had used the material for many hundreds of patients in the past 12 years and found it has "wide usefulness" because a good laxative effect can be obtained without the danger of ill effects, even when used for long periods.

It is especially useful in children suffering disorders of the intestinal tract. They also have found it helps relieve constipation in patients with poliomyelitis, especially the severely paralyzed who require artificial lungs.

A Survey of Dog Bites in Arlington

S. P. MAYERS, JR., M.D.
R. G. BEACHLEY, M.D.
Arlington, Virginia

SINCE March, 1951, dog bites in Arlington have been reported to both the Police and the Health Departments. Whichever Department receives the original report, transmits it to the other. When the bite is reported, information is obtained concerning the name, address, age, race and sex of the victim, the site of the bite, and the name and address of the owner of the dog. The case is then investigated by the Health Department and proper measures are taken to protect the parties concerned and the community.

Recently, a survey was made of the records of these cases and the data obtained was tabulated for the 46 month period from March, 1951, to December, 1954. This report is concerned with the information obtained from the survey.

Yearly and Seasonal Incidence of Bites

For the past 4 years both the total number of dog bites per year and the rate per 100,000 population have increased rapidly. (See Figure 1). The increase has occurred at a fairly constant rate of about 50 bites per year or about 25 bites per 100,000 population.

Breaking down the yearly figures to show the monthly incidence over the 46 month period, the increase can be seen more graphically. (See Figure 2).

Looking at the graph of the monthly incidence of bites, a definite pattern of seasonal variation is noted. For this reason, another graph was plotted showing the average monthly incidence of bites. (See Figure 3).

As can be seen from this graph, there is a peak reached in May followed by a lesser peak in September. The low point of the year occurs in December and January. The most probable reason for this seasonal variation is the weather. In the Spring and early Fall, more people and dogs are out of doors and active because of pleasant weather conditions.

Figure 1
Yearly Incidence

Year	Number of Bites	Estimated Population	Rate of Bites/100,000 Population
1951.....	372 (10 mos.)	143,750	300
1952.....	473	148,000	320
1953.....	525	150,000	350
1954.....	574	152,500	376

Age of Victim

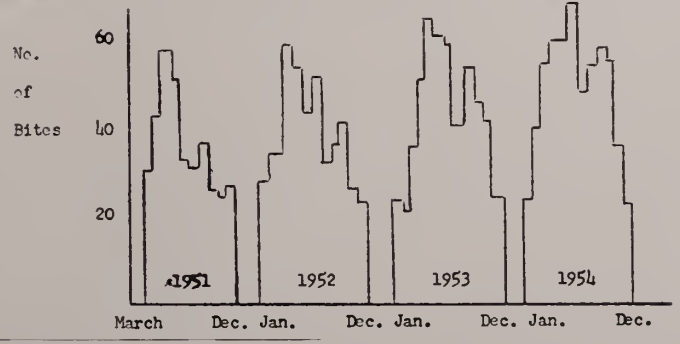
The age group most often bitten is the 6-10 age group accounting for 30.8% of the bites. 25.8% of the bites occurred in the 0-5 age group. (See Figure 4). Thus, 56.6% of he victims were between 0 and 10 years of age. Obviously these younger children are the least able to protect themselves and get away from biting dogs. Then, too, this is also the age range in which the children are most likely to provoke the dog into biting them.

Site of Bite

As might be expected, the most frequent site of bite was the extremities. 73.8% of the bites involved the upper or lower extremities. (See Figure 5).

Interestingly enough, bites of the head and neck amounted to 17.8% of the total. Most of these bites occurred in young children. 2% of the bites were multiple. These are important factors because most

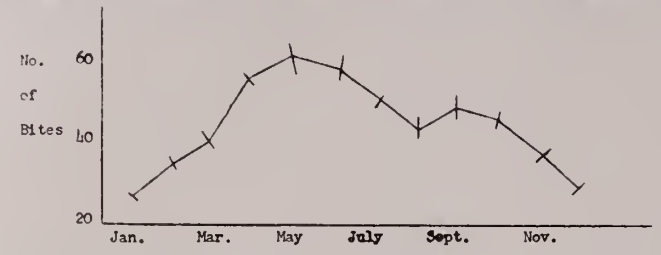
Figure 2
Monthly Incidence of Dog Bites in Arlington Over a 46 Month Period



Received for publication February 19, 1955.

authorities agree that persons who have been bitten on the head or neck or have received multiple bites should be started on the Pasteur treatment immediately and given at least 5 injections while the dog is being observed for 5 days. Following that rule, 340 persons should have been given at least 5 injections initiating the Pasteur treatment—a procedure which is not without danger itself.

FIGURE 3
Average Monthly Incidence of Dog Bites in Arlington Over a 46 Month Period



ably because the male at all age levels is more reckless and daring than the female.

STATUS OF BITING DOG

In making these tabulations any dog whose owner lived next door or in the same house as the victim was classified as being a dog owned by the family. Any dog about which there was any question as to ownership was classified as a stray. Despite these factors, an overwhelming majority of the bites (77.9%) were due to dogs owned by persons other than members of the victim's family. (See Figure 8).

Stray dogs only accounted for 15.4% of the bites over the 46 month period. The percentage of bites caused by stray dogs has begun to decline. On the other hand, the percentage of bites caused by dogs who have owners has increased. The most probable cause of this is the fact that the County Dog Ordinance allows the authorities to pick stray dogs off

FIGURE 4
Age of Victim

YEAR	0-5	6-10	11-15	16-20	Over 20
1951	100	95	50	13	86
1952	96	138	88	10	97
1953	137	139	75	13	124
1954	129	181	92	12	120
Total	462 (25.8%)	553 (30.8%)	305 (17.0%)	48 (2.6%)	427 (23.8%)

(Not all of the cases reported to the Health Department gave the age of the victim, so the total figures for this group do not equal the total number of bites. The same fact is true for the figures on site of bite, and race of victim.)

INCIDENCE ACCORDING TO RACE

Although there were far fewer bites among the colored population (See Figure 6), the rate of bites per 100,000 population was somewhat higher for the colored than for the white. The average rate for the white population was about 340 as compared to 500 for the colored.

INCIDENCE ACCORDING TO SEX

Males were bitten much more frequently than females at all times. (See Figure 7). This is prob-

FIGURE 5
Site of Bite

YEAR	Upper Extremity	Lower Extremity	Head and Neck	Trunk	Multiple
1951	89	137	65	26	9
1952	137	183	60	29	11
1953	140	186	82	28	7
1954	161	234	98	28	8
Total	527 (30.7%)	740 (43.1%)	305 (17.8%)	111 (6.4%)	35 (2.0%)

FIGURE 6
Incidence According to Race

YEAR	Colored	White
1951	20	337
1952	30	441
1953	31	494
1954	29	545
Total	110 (5.7%)	1,817 (94.3%)

FIGURE 7
Incidence According to Sex

YEAR	Male	Female
1951	256	116
1952	342	131
1953	362	163
1954	396	178
Total	1,356 (69.7%)	588 (30.3%)

FIGURE 8
Status of Biting Dog

YEAR	*Non-Family Dog	Family Dog	Stray Dog
1951	281 (75.5%)	29 (7.8%)	62 (16.7%)
1952	370 (78.1%)	27 (5.8%)	76 (16.1%)
1953	396 (75.4%)	40 (7.7%)	89 (16.9%)
1954	466 (81.4%)	35 (5.9%)	73 (12.7%)
Total	1,513 (77.9%)	131 (6.7%)	300 (15.4%)

*This refers to a dog owned by a person who was neither a member of the victim's family nor an adjacent neighbor.

the street and place them in the animal shelter. The ordinance does not allow them to pick up licensed dogs running at large. It would seem from the figures that licensed dogs running at large are a far greater hazard to the community at the present time than are stray dogs.

SUMMARY AND CONCLUSIONS

A survey has been made of dog bites reported in Arlington County over a 46 month period. Several interesting and important facts have become apparent.

1. Each year dog bites are increasing at the rate of about 25 per 100,000 population.
2. There is a seasonal pattern in the incidence of dog bites showing a greater peak in the spring and a lesser one in the early fall.
3. Over 50% of the bites occur in children in the 0-10 age group.
4. About 20% of the bites were of the head and neck or were multiple. These are the most serious types of bites requiring careful medical management.
5. The rate of bites is higher in the colored population than in the white, and males are bitten much more often than females.
6. An overwhelming majority of the biting was done by dogs owned by persons other than the victim's family or next door neighbors. This implies that the majority of these dogs were running at large.

From the above facts, it can be seen that Arlington has a problem in these dog bites which is enlarging all of the time and should be dealt with. It would appear from the data that one of the most effective measures which could be taken to curb this problem would be to prevent licensed dogs from running at large.

1800 North Edison Street

Clinicopathological Conference

The Medical College of Virginia Hospital

Prepared and Edited by
WILLIAM R. KAY, M.D.

Case #141

AN 18 year old colored male was referred to the OutPatient Department of the Medical College of Virginia because of swelling of his lower back and an abnormal gait. He had apparently been in good health until some 3-4 months earlier, when he awoke one morning with dull aching pain in the left sacroiliac region. The pain radiated down the posterolateral aspect of the left leg to the foot and was aggravated by sitting and forward bending. It was relieved somewhat by walking around. The pain lasted only three days and did not recur. Shortly thereafter the patient became aware of a painless swelling over the lower end of the spine which persisted. Approximately one month after the onset of these symptoms the patient developed a "waddling" gait, which also persisted and grew gradually more marked. He felt quite weak though he continued to be up and about. He lost approximately 24 lbs. during this illness. His local physician administered penicillin intermittently for approximately two months without benefit. Patient then consulted another physician who referred him to the Clinic, where he was examined and sent into the hospital.

He denied chills, fever, cough, night sweats and bowel or bladder disturbances. There was no history of tuberculous contact.

One month before the onset of his present illness the patient was in an automobile accident. The car seat struck him in the small of his back, but apparently produced no symptoms. During the same month he fell on his back while playing football, following which he noticed numbness and tingling in his lower back for an hour or so.

His family history was negative. Patient lived in the country not far from Richmond. He drank pasteurized milk and water from a "tested well".

Physical Examination: Temperature 101.6 (R), pulse 90, respiration 20, blood pressure 120/80, weight 114½. Patient was well developed, poorly nourished, showing evidence of recent weight loss with rather marked muscle atrophy in the lower extremities. The essential findings were otherwise limited to the back and pelvis. There was moderate scoliosis to the left of the lumbar spine and loss of the normal lumbar curve. There was a smooth, dome-shaped, resilient mass overlying the sacrum, approximately 10 cms. in diameter. There was no local heat or tenderness and the skin overlying the mass appeared normal and was not fixed to the mass. The mass itself seemed fixed to deeper structures. The gluteal muscles were atrophied. On rectal examination the anal sphincter was relaxed. There was a smooth, cystic-feeling, nontender mass filling the hollow of the sacrum and impinging on the bowel wall. The prostate was normal. The patient could flex his thighs on his abdomen, but straight leg raising was limited bilaterally to about 45° and caused pain. Knee jerks were brisk; ankle jerks were absent bilaterally. There was some questionable sensory loss in the L_5 to S_5 area. The patient



Fig. 1.

WILLIAM R. KAY, M.D., *Assistant Professor of Clinical Medicine, Medical College of Virginia.*

walked with a waddling gait, the pelvis and hip joints fixed.

Laboratory data: Hbg. 13.3 grams, WBC 7,700. Urine specific gravity 1.030, negative for albumin, sugar, and acetone; negative microscopic. Serology negative. Sedimentation rate 15 mm./hr. Serum protein 7.1 grams%, albumin 4.0, globulin 3.1. X-rays of the spine and sacrum showed irregularity of the margins of the 1st sacral body and 1st and 2nd sacral segments with destruction suggested. A barium enema showed a presacral mass displacing the rectum and lower sigmoid anteriorly for about 7.5 cms. (Fig. I). A fibrotic nodule in the left 2nd interspace was noted on the chest film.

The patient ran a fever with daily spikes between 102 and 103° his first three hospital days. His temperature then leveled off at around 100°. His symptoms remained unchanged and on the 5th hospital day a surgical biopsy was taken.

Clinical Discussion by
Harry J. Warthen, Jr., M.D.

I would like to comment first on several points presented in the protocol. Our patient developed dull aching pain in the left sacro-iliac region with radiation down the posterolateral aspect of the left leg to the foot which was aggravated by sitting and forward bending. This certainly related to the sciatic nerve which has its origin from L_4 and $_5$ and S_1, $_2$ and $_3$, and it would appear that whatever pathology was present was located in that area. Later the patient developed a "waddling gait". I imagine this means that most of the muscles about the hip were affected. The gluteal muscles probably play the biggest role in producing a "waddling gait". I note that the patient lost approximately 24 lbs. during his illness and when you consider that he had been sick for only 3 or 4 months this represents a tremendous weight loss. He had received penicillin for two months without benefit. We will assume that the physician found the patient to have fever and suspected an infection. I cannot imagine that his physician gave penicillin for two months unless he felt that there was a deep-seated infection present.

The significance of the injuries which the patient sustained a month before the onset of his present illness is hard to evaluate. Possibly this history was due to leading questions. It is difficult to determine the significance of the neurological symptoms which followed the fall but the chances are that the trauma aggravated the lesion which ultimately brought him to the hospital rather than that the injuries initiated the process.

When we come to a description of the mass we note a significant finding in that there was no local heat or tenderness and the skin overlying the mass appeared normal and was not fixed. It would be very unlikely to have a mass of this size due to infection without having involvement of the skin, particularly in view of the thin covering of subcutaneous tissue over the sacrum. The mass was fixed to deeper structures and, of course, the only deeper structure in this area is the sacrum.

The anal sphincter was relaxed. I would like to digress a moment. Relaxation of the anal sphincter is a frequent finding when there is stenosis of the bowel just above the anal sphincter or when there is pressure on the bowel wall just above the sphincter. I don't think anyone has given a satisfactory explanation as to why this occurs. Apparently the anal sphincter feels that there is no need for two to do the work of one and it relaxes completely. It is a constant finding. We next note that there was a smooth, cystic, non-tender mass filling the hollow of the sacrum and impinging on the bowel wall. Apparently the bowel wall was not involved in the mass.

The laboratory data revealed virtually nothing. X-rays of the spine and sacrum were said to show some irregularity of the margins of the first sacral body and first and second sacral segments with destruction suggested, but I looked long and earnestly at these films, and I could not be sure that I could see the changes recorded in the protocol. I consulted a radiologist and he too could not be certain of any bony change. The barium enema indicated that there was a mass anterior to the sacrum of about the same dimensions as the one posterior to the sacrum.

I note that the patient ran quite a bit of fever when he first entered the hospital, and I don't believe that there is an adequate explanation for this in the history, physical findings, laboratory work or x-rays. I wonder whether this temperature curve was a septic one—that is one which reaches its peak at about the same hour each day. Such a curve is much more suggestive of infection than one which bounces around in an erratic fashion.

So much for the protocol. We have an 18 year old colored boy with a mass involving the anterior and the posterior surface of the sacrum with involvement of the sacral plexus but with no involvement of the skin or the rectal wall. With such a history there are three things that one thinks of especially. Of course, we have to rule out infection. Our pa-

HARRY J. WARTHEN, JR., M.D., *Associate Professor of Clinical Surgery, Medical College of Virginia.*

tient had a fever, he had a mass, and he rapidly lost weight. If an abscess was present within the abdomen—say a psoas abscess—it would explain the mass presenting near the rectum although it is strange that such a mass should have remained self-limited for several months. Infections, certainly acute infections, do not behave that way. By the time this patient reached the hospital he should have had a rupture of the abscess through the bowel wall. Suppose he had an infection on the outside. A pilonidal or an atypical dissecting infection arising about the anus—conceivably could give a mass over the sacrum, but there too, an infection three or four months old should not continue to be self-contained without involvement of the skin. Of still more significance is the fact that this abscess presented on each side of the sacrum. Thus we would be forced to say the abscess arose in the sacrum itself but these x-rays do not show an infection of the sacrum of three or four months' duration so I don't see how we could possibly rationalize an abscess in this case.

He could have a specific infection. He is a Negro, and tuberculosis is always a possibility in a colored patient, particularly a young one. The same objections that were just raised to an acute infection would also hold true to about the same degree for a tuberculous infection. It could be in front of or posterior to the sacrum without the sacrum itself showing some evidence of a tuberculous infection.

That brings us to the question of a tumor which I am sure everyone has been wondering about since he first read the protocol. Of course the first tumor one thinks of in this region is a chordoma. That is the typical growth that fills the inner surface of the sacrum and gives rise to the neurologic signs and symptoms described in this case. We must remember, though, that a chordoma is a very rare condition. Dr. Bradley Coley who wrote the best article on chordomas that I have been able to find was able to collect only 150 cases of sacro-coccygeal chordoma. There are about twice that number of chordomas reported when those at the base of the skull and scattered along the entire vertebral column are included but the ones that we are discussing here are limited to about 150. It is interesting to know why the name chordoma was given this type of tumor. This terminology was given because it was thought to arise from the notochord which embryologically is situated anterior to the neural canal and the cells ultimately come to lie in the nucleus pulposus. Now that is a significant point—in other words the primordium or the anlage of a sacro-coccygeal chordoma is situated within the confines of the sacral bone.

About two-thirds of the reported cases occurred in the male and about one-third gave a history of injury which could divert us quite a bit in view of the football injury received by this patient. The onset is characteristically slow. The average duration of time after the onset of symptoms before actual hospitalization has been estimated as three years so it is usually a very slow growing tumor. Occasionally it grows much more rapidly but such cases are exceptional. It is usually a long drawn out tumor in which the patients more or less become acclimated to the tumor over a period of years and it is hard for them to recall when it started and it is difficult for them to tell when they began making concessions because of the presence of the tumor. I think cases have been recorded from three months of age to about 80 years of age but the younger ones are exceptional. The large majority occurred in the thirties and forties and a fair number in the fifties and thereafter. The three months old child may have had some type of tertoma. These tumors may present anteriorly or they may present posteriorly or they may present in both areas. I think a fair number have been reported that correspond to the case in question here. An early, and this is something I'd like to emphasize, and constant finding of chordomas on x-ray examination is destruction of the sacrum with calcium deposits in the tumor itself. The sacrum in all the films I have seen of proven chordomas is almost destroyed on one side or throughout the distal half and many look as if a high velocity shell had passed through the sacrum.

Now let us compare this with the present case. Our patient is a little young for a chordoma. The onset and the progress of the condition is far more acute than one would expect. His history was of only three or four months. The usual story is one of three or four years prior to admission to the hospital. The negative x-ray is the hardest thing to reconcile or rather an x-ray that shows as little as this one does. The x-ray of a sacrum which contains a chordoma does not require the careful scrutiny of the film that this must have needed in order to see the equivocal changes. We have to remember too where these tumors arise. A chordoma is supposed to arise in the nucleus pulposa. It has got to escape the confines of the sacrum. On the way out it should leave some evidence of its passage and certainly I saw no evidence in the x-ray of an expanding tumor which has burst through the sacrum. So the rapid onset and the high degree of—shall we say malignancy—because I think we are dealing with a tumor —does not fit in with a chordoma. The history is

against it, the x-ray is against it and I doubt very much if this case would have been presented as a CPC had it been a chordoma. These are three strong arguments against this tumor being a chordoma. This appears to be a tumor, it's closely associated with bone, it appears on both sides of the sacrum so it is hard to believe that it did not arise in the immediate neighborhood of the sacrum. Now what type of tumor will do that and also fail to show on x-ray? The first thing that one thinks of is a cartilage tumor because that does not show on x-ray with anything like the clarity of a chordoma. It would grow away from the bone as this tumor has done without necessarily destroying the sacrum. X-rays of chondrosarcomas usually show little change in the associated bone. Sometimes one cannot determine where the starting point was in relationship to the bone. That must be kept in mind.

But let us take up the question of a cartilage tumor in this case. They arise early in life—much earlier than chordomas usually do. They follow a more rapid course and it would be easier to explain the fever which the boy ran for some time on the basis of a chondroscoma rather than a chordoma although I must say that I have not been able to entirely explain the temperature of 103. A cartilage tumor, as I mentioned a moment ago, would not show calcification on the film and in that way it fits very well the case in question.

There are other tumors that can also have the same general location and cause the same symptoms due to this location. Perhaps a giant cell tumor, or a fibrosacroma, may have been present, although I think the rapidity of growth would make these tumors unlikely. It could be a ganglioneuroma, or perhaps a teratoma but in case of a teratoma one would expect the x-ray film to be much more helpful. A metastasis from a primary tumor elsewhere cannot be ruled out although there is nothing to suggest that a primary tumor is situated elsewhere. Nothing in the symptomatology or the films we have seen would point to that. With the exception of the teratoma I don't believe any of these other types of tumors would have diagnostic x-rays and the symptoms, as I say, could be the same with any of those.

Dr. Coley, whom I mentioned a few minutes ago, and I would like to commend his article to you if you are interested in the subject of chordomas, reported 7 cases which he followed at Memorial Hospital in New York. He no doubt is more familiar with the clinical aspects of bone tumors than any other physician or surgeon in the country because they have been his primary interest for many years. He reported 7 cases of chordoma. He made a correct diagnosis in only 4 cases prior to biopsy. He stresses the fact that he used aspiration biopsies and that only enabled him to make the diagnosis of chordoma in one additional case that he was previously uncertain about. In other words, he diagnosed 4 chordomas clinically, 3 escaped clinically. He then made aspiration biopsies of all seven cases and the aspiration biopsy cleared up the question in only one additional case so he had 5 correct diagnoses out of 7. That shows how uncertain the diagnosis is in these sacral tumors. A biopsy has to be done in order to be sure.

In closing I'd like to say that I do not think this is an infection. Likewise I do not thing it is a chordoma. On the law of averages I think the findings point to a cartilaginous tumor but a biopsy would be necessary in order to be certain as to what type of tumor we are dealing with.

Dr. Warthen's Diagnosis: Chondrosarcoma

E. B. Carpenter, M.D.: When we saw this boy on orthopedic rounds, most of us felt that, due to neurological changes which were present, chordoma was the most likely diagnosis, and we received strong support in this diagnosis from the neurosurgeons. The meager x-ray findings supported the diagnosis of chrondrosarcoma, but we felt it would be quite unusual for such a malignancy to attain the size it did in a period of two to three months.

Pathological Discussion by Saul Kay, M.D.

As you read in the protocol, it was planned to explore this patient, have frozen sections done on small bits of tissue and if a diagnosis could be established, then decide what to do. Tissue for frozen section consisted of several small fragments, all in all measuring about 2 centimeters and having a sort of mushy, reddish-gray appearance. The diagnosis rendered was chondrosarcoma.

Before showing the permanent sections, I would like to say something about chondrosarcoma. It can be a very difficult diagnosis to make pathologically or a very difficult one. Some texts actually state that you can't make the diagnosis of chondrosarcoma when they are very well differentiated but pathologists who have made extensive studies of bone tumors find that with painstaking care and careful search of multiple areas the diagnosis can be made. Another thing is that there are many institutions where confusion between chondrosarcoma and osteogenic sarcoma

Saul Kay, M.D., *Professor of Surgical Pathology, Medical College of Virginia.*

exists and often both are lumped together in a combined diagnosis. This is to be deplored since chondrosarcomas and osteogenic sarcomas are different tumors, have a different clinical import and occur in patients usually at different ages. The prognosis of osteogenic sarcoma is, in general, worse than that of chondrosarcoma. For one thing an osteogenic sarcoma arises from a bone forming mesenchyme while a chondrosarcoma arises from cartilage and never from bone forming mesenchymes.

The diagnosis in this particular case was not difficult to make since there were enough poorly differentiated tissues to enable one to make the diagnosis. The sections show some better differentiated areas as well as the others so that one can at least see that difficulties obtain in the study of this tumor (Fig. 2 and 3.

The first slide (Fig. 2) shows the general resemblance to hyaline cartilage as well as cells with obvious hyperchromatic plump nuclei. The second slide (Fig. 3) reveals considerable anaplasia of cells with hyperchromatic bizarre nuclei variable in size and shape.

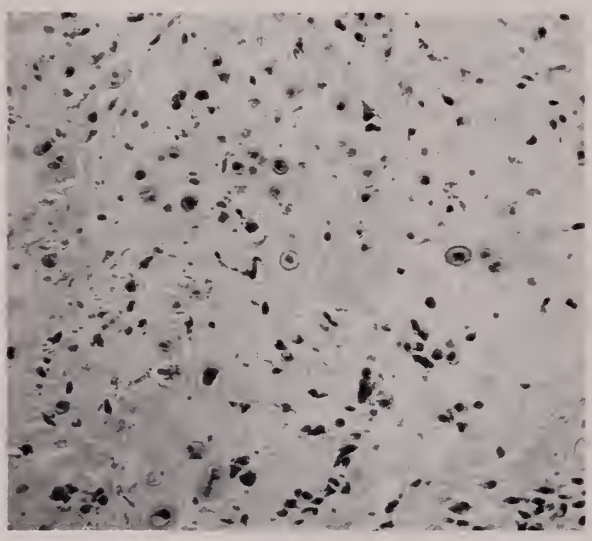


Fig. 2.

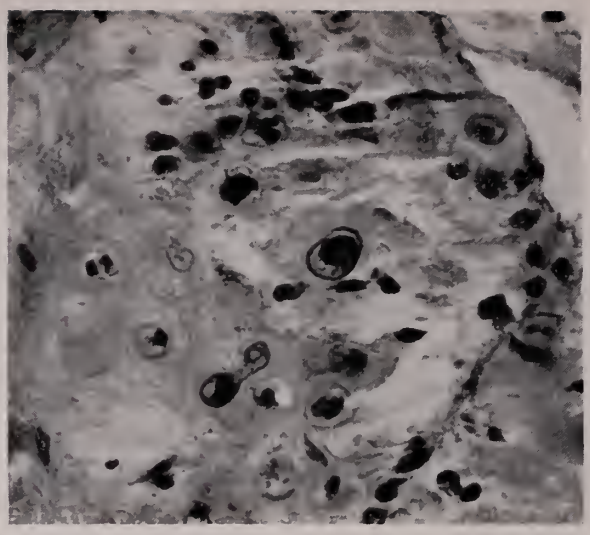


Fig. 3.

Clinical Diagnosis:	Chordoma
Dr. Warthen's Diagnosis:	Chondrosarcoma
Pathological Diagnosis:	Chondrosarcoma of the sacrum

Herman Nachman M.D.: Following biopsy and establishment of the diagnosis, this patient received radiation therapy. He has presented the clinical picture of deterioration with considerable weight loss, a decubitus over the greater trochanter on the right, increasing edema of the lower extremities and increasing urinary incontinence. So far, he has not had any interference with bowel function. I believe Dr. Mandeville has a recent chest x-ray to show.

Frederick B. Mandeville, M.D.: The previous chest film did show an oval density in the left second interspace resembling tuberculosis. However, we now have a follow-up film which shows multiple pulmonary metastases.

Reference

F. Gentil & B. L. Coley: Sacro-coccygeal Chordoma. Ann. Surg. 127: 432-455, March 1948.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Leptospirosis or Weil's Disease

While there were only two cases of leptospirosis reported in Virginia in 1954, it is a disease that should be thought of more frequently and investigations would probably lead to the discovery of more cases. In both of the above mentioned cases there was a history of rat infestation in the environment.

The onset of leptospirosis is sudden after an incubation period of four to fourteen days, usually about seven to ten. There is sometimes a chill. There is usually severe headache, photophobia with conjunctivitis, elevation of temperature to 102°-104°. The patient complains of severe muscular pain, especially in the lumbar region and calves of the legs. Prostration is marked. About the fourth day jaundice is visible in the conjunctivae but there are some cases in which no jaundice is noticeable. Erythematous or papular rashes may occur. The liver becomes moderately enlarged and is tender.

The leptospirae are present in the circulating blood during the first few days and are most numerous on the fourth or fifth days. They disappear entirely about the seventh day.

During the next stage the jaundice reaches its peak. The prognosis is grave if there is severe liver and kidney involvement. If death occurs it is most often between the eighth and sixteenth day. The fatality rate is around 5%. During this stage the urine contains much bile and a moderate amount of albumin. There is headache and muscular pains increase. The temperature may reach normal at the end of this period. At this time also, agglutinins are present in the blood serum.

The third stage follows with a fading of the jaundice and the temperature becomes normal or subnormal. There may be a secondary rise in temperature for three or four days after which it slowly falls to normal again. It is during this stage that the leptospirae increase in the urine, being at their height between the fifteenth and twenty-fifth days, and they disappear about the sixth week.

For diagnosis, the organisms should be demonstrated in guinea-pigs which should be inoculated with the blood taken around the fourth or fifth day and later by injecting some of the urine and sediments. In some cases dark field examination will reveal leptospirae in the blood around the fourth or fifth day and in the urinary sediment later.

The treatment is symptomatic, rest in bed, and aureomycin or terramycin.

The wild rat appears to be the principal source of the spread of the infection to man and the organism is L. icterohemorrhagiae. It may also be spread through the dog in which both L. icterohemorrhagiae and L. canicola are found. Living organisms are excreted in the urine of both animals, and man, coming in contact with them, acquires the disease. One of the two Virginia cases was infected during work in a wet ditch, the other was a coal miner. Sewer workers, tunnel diggers, abattoir workers, poultry dressers, cutters and cleaners of fish, etc., those who work in rat infested places, are particularly liable to have the disease. Veterinarians, kennel men and others who live or work in intimate contact with dogs are apt to be infected with L. canicola.

Every effort should be made to trace the source of any infection in man and to prevent other cases from developing from the same source. This often calls for a new campaign for rat extermination. The wearing of protective clothing—water-proof boots and gloves—may be necessary in certain instances.

Infection has been acquired from submersion or swimming in contaminated water or drinking it. This is the result of contamination through drainage from rat infested areas.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASES

	May 1955	May 1954	Jan.-May 1955	Jan.-May 1954
Brucellosis	4	6	10	15
Diphtheria	0	2	12	24
Infec. Hepatitis	84	318	684	2418
Measles	718	6405	2645	19155
Meningococcal Infections	4	11	51	61
Poliomyelitis	15	6	23	24
Rocky Mt. Spotted Fever	6	6	9	7
Streptococcal Infections (Incl. Scarlet Fever)	589	485	4149	2762
Tularemia	1	0	6	18
Typhoid Fever	0	6	17	21
Rabies (In Animals)	17	34	212	208

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

Summarization of Group Psychotherapy of Parents in a Child Guidance Clinic

The observations in this paper have been drawn from three groups of adults who have been meeting on a once a week basis for almost two and a half years. The groups are "open ended", that is, new members are added to the group intermittently. At any given time some of the members in the group may have been in the group since its beginning, others may be recent members. These groups are not mixed groups; two groups are mothers, the third is a group of fathers.

The same therapist has been with the mothers' and fathers' groups throughout their existence. In one of the mothers' groups a female psychiatric social worker has been "sitting in". The fathers' group for the first year also had a psychiatric social worker, a woman, in addition to the therapist. For a year, the therapist had met with the group by himself. During the last few months a second psychiatric social worker, again a woman, has sat in on the fathers' group. The group psychotherapist in both these groups is a psychoanalytically trained psychiatrist, whose thinking has been influenced by the concepts of Harry Stack Sullivan.

At this clinic, the groups are used in various ways. It has become part of the tradition of the clinic to include the group experience in the phenomena of intake. It has been our experience that a much clearer notion of the problems of the parents, as well as their relationship with the child, can be obtained by referring the patient to the group shortly after the initial interview. It is our conviction that the group experience gives us a much clearer picture of the dynamics of the family, as well as relieving the psychiatric social worker of the total responsibility for future referral. Our experience also indicates that observing how the adult feels with the other group members, and with herself, in the group setting, gives us much more valuable information than she is consciously able to give the individual therapist during the intake procedure.

Another way that the groups are used is what might be called "the preparation for treatment". These are patients who have difficulty in consciously accepting treatment, but who have arrived at the point of seeing that their children need some help. In the past, these patients were carried along with the child because it was part of the tradition of a child guidance clinic to see a member of the family with the child. It invariably happened that very little meaningful work was done in a one to one relationship with this sort of person. By referring this type of patient to the group, we have found that they use the treatment experience far more meaningfully and are able to much more comfortably verbalize and work through their hostility to treatment. Many of these patients, after a period in the group, will ask for and receive individual treatment in addition to their group work.

Normally in a child guidance clinic, after the intake has been concluded, the patient may wait for extended periods for treatment to begin. At this clinic, in addition to being put on the waiting list, the patients are offered an opportunity to join one of the existing groups.

At the moment groups cover a broad spectrum. There are groups for adults, both mothers and fathers; there are groups for boys in the five to eight year old category; there are groups for delinquent adolescents; there are groups for girls of five to eight years; and shortly an adolescent girls groups will be started. Since this is so, during the waiting period a great deal of meaningful work can be, and is done, by the patient in the group. During this time they can clarify their own individual needs and can get a clearer idea of how they relate to husband or wife and the children. By the time their name comes up on the waiting list, they are much better prepared to utilize the individual treatment offered.

In addition to the above methods of utilizing groups, groups are also used as an additional treatment device. For instance, after the parent and child have completed their individual work to their satisfaction, one or both parents may continue in the group indefinitely to work on their own problems of living. In many instances where the child concludes his treatment in a rather short order, the parents may elect to stay with their adult groups.

Article prepared by DR. JAMES THORPE, *Director, Fairfax County Child Guidance Clinic, Falls Church, Virginia.*

In many instances the patients feel that membership in the group acts as sort of psychiatric insurance against the child developing additional difficulty. At this clinic most of the adult patients in the group are also receiving individual treatment. This results in manifold therapeutic relationships within the group that will be discussed later in this paper. In certain instances, patients may reach an impasse with their individual therapist and may be referred to the group to see if she or he can get a clearer idea of the nature of this impasse, or to determine whether they have reached as far as they wish to go individually with their therapist.

It should be noted that the staff of this clinic is convinced of the validity of group psychotherapy. The orientation is to ascertain as quickly and validly as possible what the therapeutic needs of the patient are and to supply such service. In most instances this results in a combination of belonging to a group as well as individual work with a staff member. No attempt is made on the part of the staff to screen patients for the group on the basis of diagnostic category alone but rather to refer all patients to the group, leaving the patients themselves free to decide whether or not they want to become a group member and how much they wish to participate in the group. Whether or not the patient becomes a member of the group is much more a function of group decision and patient decision rather than staff decision. In the three years of the groups existence, no patient seems to have been harmed by this method of referral. Very few patients have left the groups; no patient left the group psychiatrically worsened for the experience. In one instance a patient who left the group experience after one session, returned to the group after two years of individual treatment with a staff member, and is now a meaningful member of the group.

Since the clinic does not force a patient to decide between individual and group work, in most instances the members of the group are usually involved in some individual work with a therapist in addition to their group experience. The mothers usually make the first attempt at treatment for the child, and they usually become the first member of the family to join the group. The next step appears to be either that mother asks for, and receives, individual treatment in addition to her group work, or else the father becomes interested in the phenomena and asks permission to join the father's group. When we hear that the father wishes to join the group, nothing further is done beyond telling him that he is welcome to come. He is not seen individually prior to his group experience. There are a great many members of the groups, who are being seen one time weekly individually, whose husbands or wives are in groups. Some of these people also have their children in individual treatment in the clinic and some of them have children in the various childrens' groups.

As a result of the combined group experience at this clinic over the past three years, certain general observations have been made on the group process as it enfolds itself in a child guidance clinic. Some of these observations warrant further scrutiny to ascertain whether or not they are valid; some of them have repeated themselves frequently enough to testify to their own validity.

The first observation that seems to be consensually validated by the experience of the staff members is that a combination of membership in a group and individual treatment, either once a week in the clinic or intensively outside, is the most useful combination for the adult patient. In a number of instances at this clinic, this combination has eliminated the need to actually take the child into treatment.

The pattern is that mothers usually initiate treatment for the child and tentatively accept some personal responsibility for the child's illness. This is followed by the mothers attempting to involve the fathers in some therapeutic participation. The fathers will choose the group as their first experience in the clinic setting. This appears to be followed by real communication between the parents beginning around their group experience. The fathers usually arrive in the group with a feeling of "being forced" or "to help out the wife". Later on they begin to accept their group as a therapeutic device to find out more about themselves.

The second observation is more tentative and we feel warrants scrutiny. Some of our data seems to indicate that certain types of patients should begin their group experience in groups of the same sex rather than to begin their group experience in mixed groups.

At intake many of the fathers appear to be passive, dependent individuals. They arrive at the clinic giving the impression that this is really none of their business, but they are coming to help out the mother. They tend to share very little of the guilt that the mother manifests about the problems of the child and tend to justify themselves on the grounds that they are supporting the family. One gets the impression that this facade is a distant maneuver designed to protect themselves against involvement with women. The women usually appear to be competent, aggressive; they are people who invariably are joiners,

that is, they belong to PTA's or League of Women Voters, etc. The women seem to accept their responsibilities for the difficulties of the child much more than the father and show a great deal of guilt around the child's difficulties. Women who have tentatively begun to work out some of their relations with women, even on a superficial level, such as womens groups, appear to be able to accept the group experience more readily than those women who historically have isolated themselves from the world of women and limited their activities to their home and family.

The group seems to provide a forum where doubts about oneself as a woman or a man are faced. In the beginning there is a "pairing off" which seems to be similar to the early adolescent chum relationship. These original pairings off are usually accomplished outside the group, though this has to be done in secret and in the beginning not something that can be discussed openly with the group. It would appear that this phenomena is the beginning of overtures towards intimacy with somebody of the same sex.

It was noted that this phenomena began much later in the father's group than the mothers'. A possible explanation for this is that it was discovered that the male therapist related differently to both groups. In the mothers' group he was more easily able to perform the function of the objective scrutinizing therapist. In the fathers' group, he really became a part of it. It was as though the therapist and the group covertly agreed not to explore this area of themselves. The therapist recognized this counter-transference problem and became clear about it and was able to formulate it to the group. The fathers' group "went ahead" in a similar fashion to the mothers' group.

In the beginning very few of these people were able to communicate or integrate adult heterosexual experience. As they grew as men and women in their own groups, the therapist began to hear more and more of their capacity to relate to their partners in adult heterosexual fashion.

This data hints at the notion that some people have to work through relationships between individuals of the same sex in an accepting and supporting forum of people of the same sex, before they can arrive at a more comfortable heterosexual adjustment.

Psychotherapy has been used in this child guidance clinic as:

1. Diagnostic procedure
2. To provide immediate service during the waiting period
3. To permit the parents to go more intensively into their problems of living, rather than to have to limit themselves to the problems of the child.

Group psychotherapy may also be used as a research tool to get a clearer idea of the dynamics of the family in our culture.

Vacation Driving Danger.

Beginning of vacation time brings a warning against long-distance, non-stop driving from a Washington, D. C. physician. Dr. Carl J. Potthoff said three-fifths of driver defects leading to accidents are fatigue and falling asleep. Writing in the May Today's Health magazine, published by the American Medical Association, Dr. Potthoff said one-fifth of drivers involved in fatal accidents are out-of-state residents but in vacation time the proportion is much higher.

"Drivers who set long mileage schedules for each day usually are fast drivers; speed is the leading cause of traffic accidents and as it increases the injuries are greater in case of accident." "Accidents sustained far from home cause much-increased difficulty. Contacts are with strangers: garage service men, physicians, lawyers, police officers. Injuries may require a long stay at the local hospital. It may be necessary to summon distant relatives. Police or civil action may require a return many months later.

"Reasonable driving schedules protect family members who are passengers, precisely the ones we wish most to protect. They provide an excellent example to children, those we wish to teach safety, particularly with respect to driving habits.

"Stopover expenses in small cities are low, perhaps less than the costs at the destination, and automobile expenses are lower when driving is leisurely.

"For safety's sake, vacation can be regarded as starting with the trip, rather than at the destination. A stopover at a point of historic interest or of beauty can be found usually. . . . Some vacationers do not set a rigid schedule; with them every hour of driving is a search for the new and unusual rather than an urgent rush."

Woman's Auxiliary . . .

President—Mrs. Maynard Emlaw, Richmond
President-Elect—Mrs. Mervin W. Glover, Arlington
Recording Secretary—Mrs. J. W. Carney, Newport News
Corresponding Secretary
Mrs. Levi W. Hulley, Jr., Richmond
Treasurer—Mrs. William C. Barr, Richmond
Publication Chairman Mrs. Wm. S. Grizzard, Petersburg

Northern Neck.

The Spring meeting of the Auxiliary to the Northern Neck Medical Association was held at Tides Inn, Irvington, on May 19th. Mrs. Maynard R. Emlaw and Mrs. Mervin W. Glover were guests.

The chairman of Research and Romance of Medicine, Mrs. Lee S. Liggan, presented to the doctors a book "Doctors of the Northern Neck of Virginia" which the members of the Auxiliary have been working on for the past year. The book is made up of biographical sketches of the doctors and is divided into three parts, Golden Anniversary Doctors, Doctors of Yesteryear, and Doctors of Today.

Mrs. Norman R. Tingle, Mollusk, is president of this Auxiliary; Mrs. C. T. Peirce, Nuttsville, president-elect; Mrs. Motley Booker, Lodge, vice-president; Mrs. A. B. Gravatt, Jr., Kilmarnock, recording secretary; Mrs. H. H. Westcott, Irvington, corresponding secretary; and Mrs. E. T. Ames, Montross, treasurer.

Ruth L. Gravatt (Mrs. A. B. Jr.)
Publicity Chairman

Petersburg.

This Auxiliary held its annual luncheon meeting on May 21st at the Lee House Diner. Mrs. M. R. Emlaw and Mrs. Nancy Graves were guests. Mrs. Emlaw gave a most interesting talk on her recent trip to Europe and their visit with the Belgium doctor's family.

Officers for the coming year were installed.

It was announced that the first of the Auxiliary Nursing Scholarships had been awarded to Miss Jeannette McMullian of Petersburg High School who plans to take a four year course at the University of Virginia.

Dorothy Uzzmann (Mrs. John)

Richmond.

At a luncheon on May 20th, the following officers were installed by Mrs. Maynard R. Emlaw: President, Mrs. George Snead; president-elect, Mrs. Carl Meador; vice-president, Mrs. William P. Morrissette; recording secretary, Mrs. Hunter Jackson; corresponding secretary, Mrs. William F. Grigg, Jr.; assistant corresponding secretary, Mrs. Maurice Vitsky; treasurer, Mrs. George K. Brooks, Jr.; parliamentarian, Mrs. Maynard Emlaw; and historian, Mrs. William Dashiell.

Alleghany-Bath.

The organization meeting of this Auxiliary was held May 11th and Mrs. Louis A. Houff, Clifton Forge, was elected president. Other officers are: president-elect, Mrs. J. M. Emmett, Clifton Forge; vice-president, Mrs. H. D. Hudnall, Covington; secretary, Mrs. Michael I. Hanna, Covington; and treasurer, Mrs. S. P. Hileman, Millboro. Twenty-one members were enrolled and the initial fall luncheon will be held on September 27th.

The Southern Medical Association,

For nearly half a century, has become renowned for its good fellowship and its personal significance to its members. The spirit of confraternity among physicians composing its membership is unequaled —giving the Southern a claim to a friendliness, and *esprit de corps,* which is unique among medical organizations.

The Woman's Auxiliary to the Southern Medical Association was organized in New Orleans, La., November 25, 1924. It is comprised of the wives of doctors who are members of the Southern Medical Association. There are no dues in the auxiliary; wives automatically become members of the auxiliary when their husbands join the Association whose dues are $10.00 per year which includes the very wonderful Southern Medical Journal published monthly; and there is NO REGISTRATION FEE AT CONVENTION.

The Auxiliary meets just once a year—at the same time and place as the Association.

Southern has three projects: Doctor's Day; Research and Romance of Medicine; Jane Todd Crawford Memorial Student Loan Fund.

Why is Doctor's Day celebrated? In 1935, March 30th was designated as "DOCTOR'S DAY" by the Southern Auxiliary to honor members of the medical profession, both living and dead, this date being selected because in 1842 Dr. Crawford Long of Georgia first successfully used anesthesia. In 1949 the red carnation was adopted as the official flower for Doctor's Day. The day is observed by memorial flowers placed in churches, special dinners, contributions to hospitals and special health projects.

What is Research and Romance of Medicine? This project was adopted in 1930 to preserve the medical history of the south with special emphasis on compilation of biographies of doctors; histories of medical societies and auxiliaries and their projects; nurses and others who have contributed to the progress of medicine.

The Jane Todd Crawford Memorial Student Loan Fund was created in 1928. The Woman's Auxiliary to the Southern Medical Association has named a committee to find ways and means of activating this loan fund. Pertinent information on this fund has been sent to each county president in all southern states and a thorough study has been made by the committee. You are urged to familiarize your membership with the committee's report in order that your councilor may express the desires of your state at the next meeting.

The Southern Medical Association and the Southern Medical Auxiliary will hold their convention in Houston, Texas, November 14-17, 1955. Headquarters for women's activities will be at the Rice Hotel. Make your reservations now. Everything is bigger and better in Texas. The hostess auxiliary is going all out to provide for a delightful time for its guests. I had a wonderful time in St. Louis last year and will be looking forward to seeing you in Houston.

Mrs. Jack W. Kennedy
Publicity Chairman
Woman's Auxiliary to the S.M.A.
Arkadelphia, Arkansas

Book Announcements . . . .

Concept of Schizophrenia. By W. F. McAULEY, M.D., Belf., D.P.M., R.C.P.S.I., Principal Psychiatric Registrar, Downshire Hospital, Northern Ireland. With a foreword by John H. Ewen, F.R.C.P., D.P.M., Formerly Physician and Lecturer in Psychological Medicine at the Westminster Hospital. Philosophical Library, New York. 1954. 145 pages. Price $3.75.

The purpose of this book is to estimate present knowledge of schizophrenia, to assess its historical background and evolution and to indicate the importance of heredity and environment. The scientific recognition of schizophrenia is traced from the pre-Kraepelin era to the typology or the interrelation of temperament and body type, as outlined by Kretschmer and his followers. A special chapter is devoted to the dynamic concept of schizophrenia, more specifically, to the Meyerian school of thought. There is also to be found in this book an account of the results of the experimental production of "psychotic" symptoms and abnormal behavior in animals.

Another chapter deals with the neurophysiological and metabolic aspects of schizophrenia. A survey of modern treatment covers shock-therapy and leucotomy. As to the former, the author considers "shock treatments of psychiatry in general, and of schizophrenia in particular, . . . examples of empiricism matched by no other in any branch of medicine, although a growing knowledge of the changes they produce tends to invest them with a rationale. They often bring the patient close to physiological collapse and perhaps in this common factor lies their efficacy." (p. 125). As to leucotomy, the author concludes that "the operation renders the patient into a fit state to receive psychotherapeutic help." (p. 133).

The book fulfills its purpose in as much as it conveys to the reader important chapters in the history of contemporary psychiatry. But this reviewer feels that a comprehensive and timely analysis of the concept of schizophrenia should also include the recent trends in America psychiatry, such as Sullivan's theory of interpersonal relations and its bearing on the understanding of abnormal behavior, Fromm-Reichmann's intensive psychotherapy of schizophrenia, and the most recent existentialistic interpretations of mental disease, which stem from Swiss, German and French sources, and are gaining momentum in this country, an increasing number of authors offering designs of a new type of psychotherapy, inspired by the experiences and ideas of E. Minkowski (Paris), Binswanger (Kreuzlingen), Storch (Muensingen), van de Horst (Amsterdam), Weigert (Washington, D. C.), Salzman (Washington, D. C.) et al.

Walther Riese, M.D.

President's Message . . . .

Tobacco and Cancer of the Lung

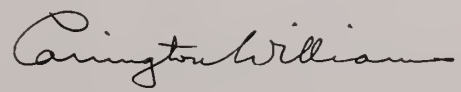
THE cause of neoplastic growth is very obscure. It would seem that it is the result of many factors and certainly does not come from any one agent or circumstance. Among the known factors that influence the growth of neoplasms are heredity, environment, diet, endocrine secretions, local trauma and irritations, and perhaps many others.

We can probably breed a human race free of cancer by following the principles of animal husbandry. By reversion to primitive environment we doubtless could greatly reduce the incidence of tumors. The effects of diet are questionable, but we could very easily prove statistically that it is important. The endocrine system certainly plays a large part in the development and growth of malignant tumors particularly those of the generative and allied organs. The incidence of cancer in these locations could certainly be reduced by castrating all children before the age of puberty. Local trauma and irritations are important factors and can be controlled more readily than the others.

This control, however, involves many factors both economic and social. It is well known that individuals who are constantly exposed to the sun and other rays develop skin cancers. Should we prohibit the farmers and fishermen from such exposure? Or advise all of our patients to avoid bathing on the beaches or revert to the costumes of the gay nineties? Or prohibit the mining of coal and other minerals which result in lung irritants? We would also have to eliminate tar roadways, gasoline and oil engines, and the innumerable other noxious fumes that are cast into the air.

I think we will have to admit that smoking is one of the factors that has influenced the increase of lung cancer. It is certainly not of the importance recently attributed to it. There is a lot of difference between mice and men and statistics can be interpreted in many different ways depending on the objective of the statistician.

And aside from these scientific considerations should we eliminate all the pleasures from life that are dangerous? If so we would stop driving automobiles for pleasure, stop swimming, eliminate all alcoholic beverages, even avoid the bathtub because many persons are injured therein. Almost everything we do involves some risk; the obvious course to take is to practice moderation; by this we would drive our automobiles carefully, swim safely, avoid an excess of alcohol, get in and out of the bathtub carefully. As to smoking one should, of course, use moderation in amount, inhalation of the smoke should not be under pressure either by deep inspiration or physical strain while the smoke is in the lung, the cigarette should be discarded with at least the last inch unburned, and when a "cigarette cough" develops one should stop smoking until it clears up. Like many other pleasant things smoking is not innoxious, but who wants to lead a test tube life?



President

Editorial . . . .

The Bauer Resolution

I URGE you to take time to study "The Bauer Resolution". The many "whereases" may discourage you from the undertaking but I can assure you that a great deal of thought was put into the preparation of this resolution by a real medical statesman.

We may not all agree on the details of the operation of Blue Shield, particularly in regard to fee schedules, but I sincerely believe the basic idea of the plan must prevail if we are going to maintain the private practice of medicine as you and I know it. The system will be preserved provided we do not think just in terms of what is best for us as individual physicians but rather in terms of what is best for both of us, the public and the medical profession to the end that the best available medical service will be provided at a price that will be fair to all concerned.

BENJAMIN W. RAWLES, JR., M.D.

THE BAUER RESOLUTION

WHEREAS, Blue Shield was organized as an effort of the medical profession to render medical care to the public in the low and middle income groups at a price it could afford to pay, and

WHEREAS, the public desires more complete financial coverage for the services against which they are insured, and,

WHEREAS, much controversy has arisen as to the relative value of indemnity versus service benefit plans, and,

WHEREAS, the medical profession is not fully aware of the functioning of Blue Shield and of the merits and demerits of indemnity and service plans, and,

WHEREAS, service benefits to be satisfactory to the public must be at a realistic level and the fee schedules of such plans must be satisfactory to the physicians rendering the service, and,

WHEREAS, Blue Shield has no desire or intention to enforce any plan or schedule of fees on the practicing profession since the practicing physicians must and should control Blue Shield and the arrangement of the fee schedules and control the professional policies under which physicians will render their services, and,

WHEREAS, the medical profession must decide what it wants to do to meet the needs and demands of the public if it wants the free practice of medicine to continue, and,

WHEREAS, the profession can best meet these needs and demands through their own organization of Blue Shield, which must be the Doctors' Plan in fact as well as in name, and,

WHEREAS, to keep the practice of medicine based on the principle of free choice of doctor and on a high level of personal doctor-patient relationship requires some sacrifices by the medical profession in order to meet competition from closed panel plans, commercial insurance plans, and to fulfill the demands of the public, and,

WHEREAS, wherever the medical profession has kept faith with the public and observed the principles on which Blue Shield was founded, other types of plans are less likely to succeed, and,

WHEREAS, Medical Indemnity of America and Health Service were established to make possible the writing of national contracts, and,

WHEREAS, these organizations have not been successful in writing such contracts, because it is impossible to write national enrollments until a uniform benefit of some nature is agreed upon, and because some plans are unable to take part in such national plans until this is accomplished, and,

WHEREAS, unless Blue Shield is enabled to write national contracts in the very near future, both Blue Shield and the medical profession will suffer tremendous loss of prestige, and,

WHEREAS, if Blue Shield fails to write these contracts, commercial insurance companies and panel plans, over which the medical profession has no control, will write such coverage, and,

Whereas, since commercial companies and panel plans cannot deliver the services of the vast majority of physicians, such a solution of the problem will inevitably lead to eventual government control of medicine.

Therefore Be It Resolved, that these opinions be reported to all Blue Shield Plans and that they be urged to enter into an intensive compaign of professional relations among the local members of the medical profession, in cooperation with the sponsoring medical societies, to acquaint physicians with the problems of the medical profession in continuing the free practice of medicine.

Society Proceedings . . . .

The Alexandria, Arlington and Fairfax

County Medical Societies met jointly for dinner on May 19th at Hunting Towers, Alexandria. This was the first dinner meeting of these societies which comprise the Tenth District and was sponsored by the Tenth District Council. The speaker was Dr. Frank M. Forster, Dean of the Georgetown University School of Medicine, who spoke on "The Relationship of the Medical Schools to the Practicing Physician".

Other guests at the speakers table included Dr. Robert Hunt, president of the Fairfax County Medical Society: Dr. Richard Palmer, president of the Alexandria Medical Society, and the following delegates to the 10th District Council: Drs. Henry Bastien and J. R. B. Hutchinson, from Arlington, Dr. Robert Rounds from Fairfax, Drs. Milton Stein and Charles Amole from Alexandria.

Alleghany-Bath Medical Society.

At a dinner meeting of this Society, held at "Three Hill" near Warm Springs on May 11th, Dr. R. L. Clatterbaugh, Clifton Forge, was elected president; Dr. Donald Myers, Hot Springs, vice-president; and Dr. R. Preston Hawkins, Jr., Clifton Forge, re-elected secretary-treasurer.

Roanoke Academy of Medicine.

New officers of the Academy, elected May 2nd, are Dr. Hugh J. Hagan, Sr., succeeding Dr. Allen Barker; Dr. H. B. Stone, Jr., vice-president and president-elect; Dr. George S. Bourne, second vice-president; and Dr. W. Conrad Stone, secretary-treasurer. Dr. L. C. Downing was elected to the judiciary committee.

Medical Association of the Valley of Virginia.

At the meeting of this Association, held on May 26th near Clifton Forge, Dr. J. Francis Dammann, associate professor of Surgery at the University of Virginia, spoke on Cardiac Surgery. Drs. Cyril I. Sease, Jr., Harrisonburg, S. Randolph Penn, Waynesboro, Edmund Horgan, Winchester, and Paxton P. Powers, Winchester, gave clinical cases during a discussion period.

Dr. H. G. Hudnall, Covington, is president of the Association, and Dr. James L. Davis, Waynesboro, secretary.

The Montgomery County Medical Society

Held its Spring meeting at the Governor Tyler Hotel in Radford on April 28th. Mr. E. E. Rupert, of the Aetna Life Insurance Company of Richmond, was the guest speaker, his subject being liability insurance.

The following new officers were elected: President, Dr. G. M. Caldwell, Christiansburg; vice-president, Dr. D. D. Chiles, Radford; and secretary-treasurer, Dr. Cary Stone, Radford.

Virginia Society of Ophthalmology and Otolaryngology.

At the annual meeting of this Society held at Natural Bridge, May 6-7, the following officers were elected: President, Dr. Howard L. Mitchell, Lexington; president-elect, Dr. L. Benjamin Sheppard, Richmond; vice-president, Dr. Edgar Childrey, Jr., Richmond; and secretary-treasurer, Dr. Maynard P. Smith, Richmond.

The Fall clinical (Post-Graduate) Sessions will be held in Richmond, November 29-30—December 1-2.

News . . . .

Calendar of Coming Events

American Congress of Physical Medicine and Rehabilitation—Hotel Statler, Detroit, Michigan, August 28-September 2.

The Medical Society of Virginia—Hotel Jefferson, Richmond, Virginia, October 16-19.

Southern Medical Association—Houston, Texas, November 14-17.

American Association of Blood Banks—Palmer House, Chicago, Illinois, November 19-21.

Virginia Society of Ophthalmology and Otolaryngology—Medical College of Virginia, Richmond, Virginia, November 29-December 2.

Commencements.

Medical College of Virginia

The following are members of the 1955 Class of the School of Medicine with hospital appointments:

Medical College of Virginia, Richmond—Drs. Harry Wilson Bachman, Jr., Bristol, Tenn.; Marshall Evans, Richmond; Jean Louise Harris, Richmond; John Payne Jimenez, Stuarts Draft; Arnold Hugh Meckley, Elkview, W. Va.; John Turpin Myles, Fayetteville, W. Va.; Nicholas George Poulos, Richmond; Douglas Oxley Powell, Huntington, W. Va.; Robert George Proctor, Richmond; William Joseph Riley, Weston, W. Va.; Arlie Harold Westfall, Enterprise, W. Va.; and Claiborne Gooch Whitworth, Richmond.

Johnston-Willis Hospital — Richmond—Drs. Robert Stuart Boatwright, Marion; Thomas Rives Butterworth, Jr., Fairmont, N. C.; Charles Counts, Coeburn; Richard Wine Dodd, Roanoke; Walter Draper, Richmond; Willard Epperly Lee, Jr., Richmond; William King Orr, Chatham Hill; William DeWitt, Rusher, Richmond; Frank Matthews Sasser, Jr., Richmond; Ray Huey Smith, Midlothian; and Marion Crockett Waddell, Richmond.

Stuart Circle Hospital, Richmond—Drs. Nelson Moffett Fox, Jr., Richmond; Donald Rider Holsinger, Martinsville; Robert William Iden, Berryville; and Frederick Gunnar Pierce, Jr., Richmond.

Norfolk General Hospital, Norfolk—Drs. Steven John Abramedis, Clifton Forge; Milton De Rohan Chalkley, Suffolk; Ronald Kenneth Elswick, Richlands; Paul Brown Givens, Jr., Hilton Village; George Stevens Richardson, Smithfield; George Hugh Warren, Jr., Smithfield; and Earl Wilson Watts, Jr., Lexington.

De Paul Hospital, Norfolk—Drs. William Everett Boyd, Norfolk; James Perry Charlton, Roanoke; Arthur Benjamin Frazier, Alexandria; Jack Stiles Garrison, Fredericksburg; Fitzhugh Mayo, Richmond; Stuart Connell Nottingham, Norfolk; and George Walter Reese, Jr., Richmond.

Lewis-Gale Hospital, Roanoke—Drs. William Abraham Cassada, Jr., Waverly; Byron Parker Crow, Roanoke; Walter Harley Davidson, Rural Retreat; Nancy May Garrett, Vinton; Frank Dargan McKenney, Jr., Petersburg; and Edward Charles Paarfus, Stuart.

Winchester Memorial Hospital, Winchester—Dr. Willis Edward Anderson, Jr., Roanoke.

Massachusetts Memorial Hospitals, Boston, Mass.—Dr. Theodore Adler, Norfolk.

Worcester City Hospital, Worcester, Mass.—Drs. John Joseph Battaglino, Jr., Bluefield, W. Va.; and Davis Burton Wyatt, Glen Allen.

University Hospitals, Iowa City, Ia.—Drs. William Edward Bell, Morgantown, W. Va.; and Reginald Rudyard Cooper, Dry Fork, W. Va.

St. Joseph Hospital, Flint, Mich.—Dr. Harry Samson Blethen, Jr., Huntington, W. Va.

Louisville General Hospital, Louisville, Ky.—Dr. John Arnold Board, Altavista.

Philadelphia General Hospital, Philadelphia, Pa.—Dr. John David Bradford, Grafton, W. Va.

Robert Packer Hospital, Sayre, Pa.—Dr. Charles Patterson Cardwell, III, Richmond.

Harrisburg Hospital, Harrisburg, Pa.—Dr. Howard Ayres Silverman, Beckley, W. Va.

Presbyterian Hospital, Philadelphia, Pa.—Dr. William Reed Smouse, Fairmont, W. Va.

University Hospitals, Madison, Wis.—Drs. Mary Ann Bigger Burton, Belmont, N. C.; William Stewart Burton, Chincoteague Island; William Ervin

DesPortes, Richmond; and William Robert Harlan, Jr., Richmond.

Methodist Hospital, Indianapolis, Ind.—Dr. Robert Burris Chevalier, Indianapolis, Ind.

Memorial Hospital, Charleston, W. Va.—Drs. John McMillen Cokeley, Morgantown, W. Va.; Harry Arden Jackson, Gassaway, W. Va.; Irvin Samuel Perry, Bristol; William Samuel Sadler, Barboursville, W. Va.; Robert Earl Stone, Logan, W. Va.; Wilk Otis West, Princeton, W. Va.; Charles Pickney Winkler, Ronceverte, W. Va.; and Moseley Hubbard Winkler, Ronceverte, W. Va.

Ohio Valley General Hospital, Wheeling, W. Va.—Drs. William Paige Sinclair, Wheeling, W. Va.; George Miley Solan, Moorefield, W. Va.; and Bernard F. Stubbs, Wheeling, W. Va.

Peoples Hospital, Akron, Ohio—Drs. Joseph Livingstone Glick, Bridgewater; Harry Lee Kraus, Denbigh; and Donald Ross Lantz, Parkersburg, W. Va.

Cincinnati General Hospital, Cincinnati, Ohio—Dr. Hunter Holmes McGuire, Jr., Richmond.

St. Luke's Hospital, Cleveland, Ohio—Dr. David Lee Pickett, Moundsville, W. Va.

Mt. Carmel Hospital, Columbus, Ohio—Dr. John Alden Goodno, Jr., Huntington, W. Va.

Mercy Hospital, Springfield, Ohio—Dr. Aubrey Lee Stafford, Pembroke.

Orange Memorial Hospital, Orlando, Fla.—Dr. Erasmus Bacon Hardee, Jr., Vero Beach, Fla.

Jackson Memorial Hospital, Miami, Fla.—Dr. Richard Mimms Lee, Richmond.

Meadowbrook Hospital, Hempstead, N. Y.—Dr. Clarence Bernard Hortenstine, Abingdon.

Bellevue Hospital Center, New York, N. Y.—Dr. Milton Wigod, Long Island City, N. Y.

North Carolina Memorial Hospital, Chapel Hill, N. C.—Drs. Robert Henry Hux, Portsmouth; Benjamin Thomas Prince, Stony Creek; and Clarence Waldo Taylor, Jr., Pocohontas.

Duke Hospital, Durham, N. C.—Drs. Andrew Stanley Tegeris, Norfolk; and Raleigh Lewis Wright, Jr., Roanoke.

University of Minnesota Hospitals, Minneapolis, Minn.—Dr. William Bruce Lundeen, Newport News.

Jefferson-Hillman Hospital, Birmingham, Ala.—Dr. Cary Jake Lambert, Brodnax.

Brooke Army Medical Center, San Antonio, Tex.—Dr. Joseph Bud Kohen, Jr., Norfolk.

University of Texas Medical Branch Hospitals, Galveston, Tex.—Dr. James Thomas Robinson, Jr., Luray.

Fitzsimons Army Hospital, Denver, Colo.—Dr. Paul Middleton, Arlington.

Grace-New Haven Community Hospital, New Haven, Conn.—Dr. Perry Franklin Mullinax, Jr., Richmond.

Waterbury Hospital, Waterbury, Conn.—Dr. Juanita Brown Rentsch, Derby, Conn.

Union Memorial Hospital, Baltimore, Md.—Dr. William Templeton Norris, Jr., Salem.

Dr. Alden Brigham Mayer, Williamsburg, was also a member of the graduating class.

University of Virginia

Members of the 1955 class of the School of Medicine, with hospital appointments are:

University of Virginia Hospital, Charlottesville—Drs. David J. Crawford, Eugene C. Culbertson, Robert K. Duley, Jack S. Faulconer, John S. Fletcher, Dail W. Longaker, Irvin Robinson, Edward P. Sprinkle, Richard A. Vinton, Jr., and Thomas A. Wash.

Medical College of Virginia, Richmond—Dr. Loyd C. Brannon.

Norfolk General Hospital, Norfolk—Drs. Robert L. Cassidy, Harold L. Chandler, Jr., Edward Harris, Chimer D. Moore, Jr., Jerome D. Perlman, J. Paul Smith, Jr., and William W. A. Walker.

Memorial & Crippled Childrens Hospital, Roanoke—Dr. John Thornton Wood.

Strong Memorial Hospital, Rochester, Minn. Dr. William F. Addington.

Stanford University Hospital, San Francisco, Calif.—Dr. Robert N. Akeley.

University of California Hospitals, San Francisco, Calif.—Dr. George W. Goldthorpe.

Georgia Baptist Hospital, Atlanta, Ga.—Drs. Kurtz E. Alderman and Blair M. Webb.

Grady Memorial Hospital, Atlanta, Ga.—Dr. Paul O. Howard.

Jackson Memorial Hospital, Miami, Fla.—Drs. Emory W. Bitzer, Jr., and Henry C. Camp.

Naval Hospital, Bethesda, Md.—Dr. Walter Blankenbaker.

Union Hospital, Baltimore, Md.—Drs. Virgil A. Motley, Jr., and Anderson M. Renick, Jr.

Sinai Hospital, Baltimore, Md.—Dr. Carrell A. Weinberg.

Hartford Hospital, Hartford, Conn.—Dr. David A. Browne.

Grace New Haven Hospital, New Haven, Conn. —Drs. Johnson T. Carpenter and Donald M. Levy.

Detroit Receiving Hospital, Detroit, Mich.— Dr. Henry G. Bryan.

Walter Reed Hospital, Washington, D. C.— Drs. F. Sterling Davis, David P. Minichan, Jr., and Robert B. Point.

Madigan Hospital, Tacoma, Wash.—Drs. James E. Etheridge, Jr., and Alfred D. Morris.

Public Health Service, Staten Island, N. Y.— Dr. Herschel C. Gore, Jr.

The New York Hospital, New York, N. Y.— Drs. Stanley Harris, Roger H. Perry, Irving Seidman, and Munsey S. Wheby.

Maimonides Hospital, New York, N. Y.—Dr. Murray M. Hausner.

Barnes Hospital, St. Louis, Mo.—Dr. James Russell Green.

Peter Bent Brigham Hospital, Boston, Mass. —Dr. James T. Hamlin, III.

Presbyterian Hospital, Pittsburgh, Pa.—Dr. Terring Heironimus.

Presbyterian Hospital, Philadelphia, Pa.—Dr. Mildred E. Sheesley.

Ohio Valley General Hospital, Wheeling, W. Va.—Dr. James B. Johnson.

Cincinnati General Hospital, Cincinnati, Ohio —Drs. Carl J. Kilgore, Jr., and Berryman Voss Neal.

University Hospitals, Cleveland, Ohio—Drs. Byrne R. Marston, Frank G. Turner, Peyton E. Weary, and Frederic Westervelt.

Cleveland City Hospital, Cleveland, Ohio— Dr. Peter W. Reed.

Mary Hitchcock Memorial Hospital, Hanover, N. H.—Dr. John R. Kindell.

Presbyterian Hospital, Chicago, Ill. — Dr. James B. Magee.

North Carolina Memorial Hospital, Chapel Hill, N. C.—Drs. White M. Wallenborn and Henry M. Ware.

Columbia Hospital, Columbia, S. C.—Dr. Edward S. White.

Dr. Dimitri Poligo is also a member of the graduating class.

American Medical Association.

At the annual meeting held in Atlantic City, June 6-10, Dr. Elmer Hess, Erie, Pa., succeeded Dr. Walter B. Martin to the presidency. Other officers elected were; president-elect, Dr. Dwight Harrison Murray, Napa, Calif.; vice-president, Dr. Millard D. Hill, Raleigh, N. C.; and vice-speaker, Dr. Louis M. Orr, Orlando, Fla. Dr. Thomas P. Murdock, Meriden, Conn., was re-elected to a five-year term on the Board of Trustees.

Dr. Parsons Associated with Dr. Whitmore.

Dr. William H. Whitmore, Norfolk, has announced that Dr. Philip B. Parsons is now associated with him in the practice of radiology.

Dr. Harold Goodman,

Richmond, has been appointed chief of the Radiological Service at McGuire VA Hospital. He had been acting chief since August 1954.

Dr. Goodman has also been promoted from associate to assistant professor in radiology at the Medical College of Virginia.

Virginia Academy of General Practice.

At the annual meeting held at The Chamberlin, Old Point Comfort, May 13-15, the following officers were elected: President, Dr. Rufus Brittain, Tazewell; president-elect, Dr. Frank E. Tappan, Berryville; vice-president, Dr. W. Linwood Ball, Richmond; secretary, Dr. Russell G. McAllister, Richmond; and treasurer, Dr. Carl W. Meador, Richmond.

New directors elected for a term of three years are Drs. Alter Laibstain, Norfolk; William J. Hagood, Jr., Clover; A. Broaddus Gravatt, Kilmarnock; and Ben T. Painter, Williamsburg.

The 1956 Annual Scientific Assembly will be held at The Homestead, Hot Springs, March 2-4, 1956.

Dr. Lewis G. Richards, Jr.

Lynchburg, was recently elected president of the Boonsboro Community League.

Dr. John P. Lynch

Addressed the Richmond Traffic Club at its June meeting, his subject being "Problems of Our Aging Population".

Medical College of Virginia Alumni.

Dr. James T. Tucker, Richmond, was named president-elect of the Alumni Association at its recent meeting. He will succeed Dr. William N. Hodgkin of Warrenton. Dr. Richard Lee Simpson and Dr. Harvey B. Haag, both of Richmond, were re-elected secretary and treasurer, respectively.

Dr. T. Southgate Ely,

Jonesville, delivered the graduating address at the Coeburn High School.

C. & O. Hospital Dedicates New Wing.

A new million dollar wing of the C. & O. Hospital in Clifton Forge was dedicated on May 12th. This adds 75 beds to the hospital with a total capacity of 220. Mr. Walter J. Tuohy, president of the C. & O. Railway, said "This hospital wing is a living memorial to the devotion, loyalty and skill of Dr. J. M. Emmett."

Post Graduate Medical Cruise.

Duke University School of Medicine is sponsoring a 12-day post graduate medical cruise, November 23rd, to the Caribbean. The cruise is aboard the M. S. "Stockholm" and sails from Wilmington, N. C. Ports to be visited are Port-au-Prince, Cartagena, San Blas Islands, Cristobal, and Kingston.

Members of the Faculty are Drs. Wilburt C. Davison, Bayard Carter, Barnes Woodhall, J. Lamar Callaway, and William McNeal Nicholson. The medical program will constitute 25 hours of formal teaching and a certificate of attendance will be issued.

All members of the profession and their friends are invited. For further details, address the Director of Post-Graduate Education, Duke University School of Medicine, Durham, N. C.

The Seizure Control Clinic

Of the University of Virginia Hospital will hold a field clinic in South Boston at the Halifax County Health Department on July 13th and one in Arlington at the County Health Department on July 20th. These clinics are sponsored by the Bureau of Crippled Children of the State Health Department and the Virginia Society for Crippled Children and Adults and there is no charge for a visit.

The field clinics are held for the dual purpose of checking the progress of patients previously seen and for screening new patients. Indigent patients who have any form of epilepsy or seizures may be referred by a doctor. Appointments may be obtained from the Anti-Convulsive Clinic, University of Virginia Hospital, Charlottesville.

Wanted Physicians.

Junior, Staff, Chiefs of Service. Salary ranges of $7,680-$9,168, depending upon experience. Excellent opportunity for advancement. 4500 bed mental hospital. Convenient to Richmond, Virginia, and Washington, D. C. Some housing available. Send resume to Superintendent, Box 271, Petersburg, Virginia. (*Adv.*)

Obituaries . . . .

Dr. Thomas Kennerly Terrell,

Prominent physician of Lynchburg, died June 4th, at the age of eighty-five. He was a graduate in medicine of the University of Virginia in 1895. Dr. Terrell was for more than half a century a leader in community affairs of Campbell and Bedford Counties. He had been a member of The Medical Society of Virginia for fifty-four years and was made a Life Member in 1948. A sister survives him.

Dr. Thomas Jefferson Hughes.

Word has just been received of the death of Dr. Hughes of Roanoke on March 19th. He was eighty years of age and a graduate of the University College of Medicine, Richmond, in 1896. Dr. Hughes was one of the founders of the Shenandcah Hospital and was a past president of the Roanoke Academy of Medicine. He was a Life Member of The Medical Scciety of Virginia, having joined in 1902.

Dr. Clabe Baker Greear,

Died May 29th, having been in ill health for some years. He was seventy-eight years of age and received his medical degree from the University of Iowa in 1902. Dr. Greear had practiced in Honaker since 1903. He suffered a heart attack about ten years ago and since that time had confined his work to office practice only. Dr. Greear was twice president of the Russell County Medical Society, a past member of the County Board of Health, and a member of the medical examining board and volunteer medical service board in World War I. He was a Life Member

of The Medical Society of Virginia. His wife, one son and two daughters survive him.

Dr. John Walter Simmerman,

Roanoke, died May 25th, having been in failing health for some time. He was sixty-eight years of age and a graduate in medicine from the University of Maryland in 1911. Dr. Simmerman had practiced for more than forty years in Roanoke and was associated with the Shenandoah Hospital. He had been a member of The Medical Society of Virginia since 1912. His wife and two daughters survive him.

Dr. Frederick Melville Horsley,

Arrington, died May 11th, at the age of eighty. He graduated from the Medical College of Virginia in 1908 and had practiced in Nelson County for forty years prior to his retirement. Dr. Horsley was a founder of the Lovingston Health Center and a former member of the Nelson County Men's Club. He was a member of The Medical Society of Virginia. His wife and three sons survive him.

Dr. John Thurston Thornton,

Charlottesville, died May 30th, after a long illness. He was eighty years of age and a graduate of the Medical College of Virginia in 1902. He was superintendent of the Roanoke Hospital and on the staff of the Wheeling, W. Va., Clinic until his retirement in 1942. Dr. Thornton had been a member of The Medical Society of Virginia since 1944. His wife and four children survive him.

Dr. Bowman.

A special meeting of the Petersburg Medical Faculty was held May 9th to pay tribute to the memory of their late colleague, Dr. Wilbur M. Bowman, whose death occurred May 6, 1955. The following resolutions were adopted:

WHEREAS, in the death of Dr. Wilbur M. Bowman, this body lost a most valued member and his death has saddened our hearts; and,

WHEREAS, Dr. Bowman will be long remembered as Historian of Petersburg Medical Faculty; his diligent efforts made possible complete records of the Faculty, dating from its organization in 1846; and,

WHEREAS, in his death, not only the medical profession but the community as a whole has lost a most useful citizen; and,

WHEREAS, Dr. Bowman, who held the position of City Health Officer at the time of his death, was a recognized authority on Venereal Disease Control and his passing will be greatly felt in Public Health throughout the State.

NOW, THEREFORE, BE IT RESOLVED: That these resolutions be spread on the minutes of the Faculty; that a copy be sent to his widow and to the Virginia Medical Monthly and be published in the local newspaper.

WILLIAM S. SLOAN, *Chairman*
MEADE C. EDMUNDS
EDITH I. MILLER

Notes on the Diagnosis and Management of "Dizziness"

II. False Dizziness



1. Romberg's Sign

The patient stands with his feet together and his eyes closed. Inability to maintain equilibrium may indicate locomotor ataxia or sclerosis of the posterior columns of the spinal cord (tabes dorsalis).

2. Inability to Walk a Straight Line

3. Inability to Stand on One Foot

A patient's inability to stand on one foot without lurching may be a helpful test in distinguishing between "dizziness" which is purely psychogenic and that which is of organic origin.

False dizziness is a sensation of sinking or lightheadedness which is often of psychogenic origin. It should be distinguished from true "dizziness" or vertigo[1] in which there is a definite whirling, moving sensation.

Unsteadiness, lightheadedness and similar manifestations of false dizziness[2] may be psychogenic or the result of arteriosclerosis, hypoglycemia, drug sensitivity and general metabolic disturbances such as anemia and malnutrition. Hypertension is often the cause of these symptoms.

Psychogenic dizziness probably originates at the highest brain centers. It may be described as a sense of uncertainty with occasional mild lurching but not to the point of falling. In these patients there is no nausea, no disturbance of vestibular pathways and otologic and neurologic examinations are negative. The sensation is unaffected by head movement. Symptoms usually disappear[3] with complete rest.

Dramamine® has been found highly effective in many of the conditions already mentioned. Maintenance therapy with Dramamine will often keep the patient from becoming incapacitated by his condition.

Dramamine is also a standard for the management of motion sickness and is useful for relief of nausea and vomiting of fenestration procedures and radiation sickness and for relief of "true dizziness" of other disorders.

Dramamine (brand of dimenhydrinate) is supplied in tablets (50 mg.) and liquid (12.5 mg. in each 4 cc.). G. D. Searle & Co., Research in the Service of Medicine.

1. Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.

2. DeWeese, D. D.: Symposium: Medical Management of Dizziness. The Importance of Accurate Diagnosis, Tr. Am. Acad. Ophth. *58*:694 (Sept.-Oct.) 1954.

3. Kunkle, E. C.: Central Causes of Vertigo, J. South Carolina M. A. *50*:161 (June) 1954.

SEARLE



The Directors of

TERRACE HILL NURSING HOME, INC.

"Understanding Care"

Announce the Appointment of

MRS. RUBY LEE COUNCIL, R.N., *Superintendent*

and

LARRY K. MUSSELMAN, *Resident Externe*

DIAL 3-3993 RICHMOND, VIRGINIA

McGUIRE CLINIC

ST. LUKE'S HOSPITAL

RICHMOND, VIRGINIA

General Medicine

HUNTER H. McGUIRE, M.D.
MARGARET NOLTING, M.D.
JOHN P. LYNCH, M.D.
WM. H. HARRIS, JR., M.D.
JOHN B. CATLETT, M.D.
ROBERT W. BEDINGER, M.D.

Orthopedic Surgery

JAMES T. TUCKER, M.D.
BEVERLEY B. CLARY, M.D.
EARNEST B. CARPENTER, M.D.

Ophthalmology, Otolaryngology

FRANCIS H. LEE, M.D.

General Surgery

WEBSTER P. BARNES, M.D.
JOHN H. REED, JR., M.D.
JOHN ROBERT MASSIE, JR., M.D.
JOSEPH W. COXE III, M.D.

Dental Surgery

JOHN BELL WILLIAMS, D.D.S.

Urology

AUSTIN I. DODSON, M.D.
CHAS. M. NELSON, M.D.
AUSTIN I. DODSON, JR., M.D.

Pediatrics

HUBERT T. DOUGAN, M.D.

Obstetrics

W. HUGHES EVANS, M.D.
W. H. COX, M.D.
JAMES M. WHITFIELD, M.D.

Bronchoscopy

GEORGE AUSTIN WELCHONS, M.D.

Roentgenology

JESSE N. CLORE, JR., M.D.
STUART J. EISENBERG, M.D.

Pathology

J. H. SCHERER, M.D.

Treasurer: RICHARD J. JONES, BS., C.P.A.

RIVERSIDE HOSPITAL, Newport News, Va.



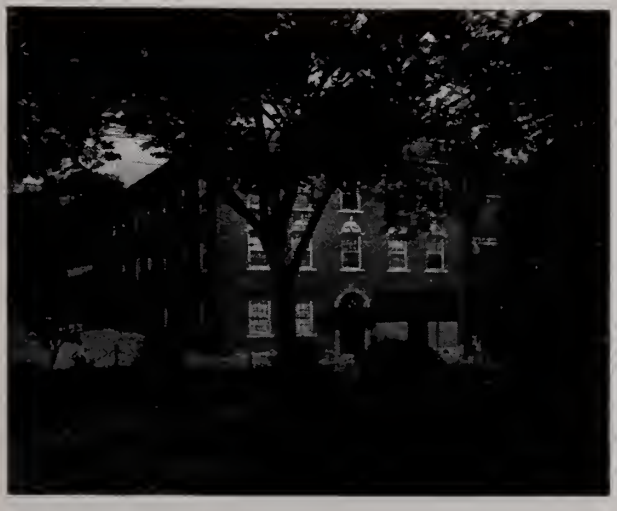
A General Hospital (265 beds) with Departments in Medicine, Surgery, Obstetrics, Pathology, Radiology, Pediatrics and Nursing. The Hospital is accredited by the Council on Medical Education of the American Medical Association for training first year interns, residencies in the surgical specialties for one and two years, general practices two years full approval, internal medicine, and obstetrics and gynecology, and the School of Nursing is accredited by the Virginia State Board of Nurse Examiners.

DAVID E. WATSON,
Administrator

MISS ROSE M. DEWEVER, R.N.,
Director, School of Nursing

Gill Memorial Eye, Ear and Throat Hospital, Inc.

Roanoke, Virginia



STAFF

ELBYRNE G. GILL, M. D.
HOUSTON L. BELL, M. D.
THOMAS QUILTY, M. D.
DORIS L. JANES, B. S., O. D.
(Orthoptics and Contact Glasses)
S. H. HOLLAND, M. D.
ROBERT B. JONES, JR., M. D.

A Modern, Fireproof Hospital, Specially Designed and Equipped for the Medical and Surgical Care of Ophthalmology, Otolaryngology, Facio-Maxillary Surgery, Bronchoscopy and Esophagoscopy.

Complete Laboratory and X-Ray Equipment.

Physicians and Graduate Nurses in Constant Attendance.

The Hospital offers a residentship of three years to a graduate of an approved medical school, who has had an internship of at least one year in an approved hospital.

For further information, address

BUSINESS MANAGER, BOX 1789, ROANOKE, VIRGINIA

STUART CIRCLE HOSPITAL

413-21 Stuart Circle
RICHMOND, VIRGINIA

Medicine:
Manfred Call, III, M.D.
M. Morris Pinckney, M.D.
Alexander G. Brown, III, M.D.
John D. Call, M.D.
Wyndham B. Blanton, Jr., M.D.

Obstetrics and Gynecology:
Wm. Durwood Suggs, M.D.
Spotswood Robins, M.D.
Edwin B. Parkinson, M.D.

Orthopedics:
Beverley B. Clary, M.D.

Pediatrics:
Charles P. Mangum, M.D.
Edward G. Davis, Jr., M.D.

Ophthalmology, Otolaryngology:
W. L. Mason, M.D.

Pathology:
Regena Beck, M.D.

Anesthesiology
William B. Moncure, M.D.
Hetii Owen, Jr., M.D.

Surgery:
A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr., M.D.

Urological Surgery:
Frank Pole, M.D.

Oral Surgery:
Guy R. Harrison, D.D.S.

Plastic Surgery:
Hunter S. Jackson, M.D.

Roentgenology and Radiology:
Fred M. Hodges, M.D.
L. O. Snead, M.D.
Hunter B. Frischkorn, Jr., M.D.
William C. Barr, M.D.

Physiotherapy:
Miss Etheleen Dalton

Director:
Charles C. Hough

ST. ELIZABETH'S HOSPITAL

RICHMOND 20, VIRGINIA

STAFF

Guy W. Horsley, M.D.	General Surgery and Gynecology
D. Coleman Booker, M.D.	General Surgery and Gynecology
Austin I. Dodson, M.D.	Urology
Austin I. Dodson, Jr., M.D.	Urology
J. Edward Hill, M.D.	Urology
Douglas G. Chapman, M.D.	Internal Medicine
Eimer S. Robertson, M.D.	Internal Medicine
T. E. Stanley, M.D.	Internal Medicine
Fred M. Hodges, M.D.	Roentgenology
L. O. Snead, M.D.	Roentgenology
Hunter B. Frischkorn. Jr., M.D.	Roentgenology
Helen Lorraine	Medical Illustration

ADMINISTRATION

William Scott	Business Manager

SCHOOL OF NURSING

The School of Nursing is affiliated with The Johns Hopkins Hospital School of Nursing for a three months' course each in Pediatrics and Obstetrics, and with the Tucker's Hospital in Richmond for a 12 weeks course in Psychiatry.

Address: Superintendent of Nurses

Upjohn
KALAMAZOO

Indicated wherever oral cortisone or hydrocortisone is effective. Available in 5 mg. tablets in bottles of 30 and 100. Usual dosage is ½ to 1 tablet three or four times daily

Deltasone*

Less sodium retention, less potassium depletion

*Trademark for the Upjohn brand of prednisone (delta-l-cortisone)

Third Decade of Nursing

MODERN IN EQUIPMENT

MRS. PLYLER'S

KATE E. PLYLER (1876-1947)

OLD IN TRADITION

NURSING HOME

MARY INGRAM CLARK

CONVALESCENT — CHRONIC — AGED

- Equipped for oxygen and transfusions
- 30 special & general nurses
- 24-hour nursing care
- Centrally located
- 50-bed capacity
- Dietician
- Rates from $42.00 to $70.00 per week for room, board and general nursing care.





For further information write or call MRS. GENE CLARK REGIRER, Supt.

1613-15-17 Grove Avenue—Richmond, Virginia—Telephone 84-3221

RICHMOND EYE HOSPITAL
RICHMOND EAR, NOSE AND THROAT HOSPITAL
(COMBINED)

RICHMOND, VIRGINIA



A new non-profit Community Hospital specially constructed for the treatment of Eye, Ear, Nose and Throat Diseases, including Laryngeal Surgery, Bronchoscopy and Plastic Surgery of the Nose.

Professional care offered a limited number of charity patients.

ADDRESS: JULIA WAGNER WATERS, R.N., *Administrator* 408 North 12th Street

RIVERSIDE CONVALESCENT HOME

Sophia & Fauquier Sts. **Fredericksburg, Virginia**



For convalescent, aged, chronically ill, and retired persons.

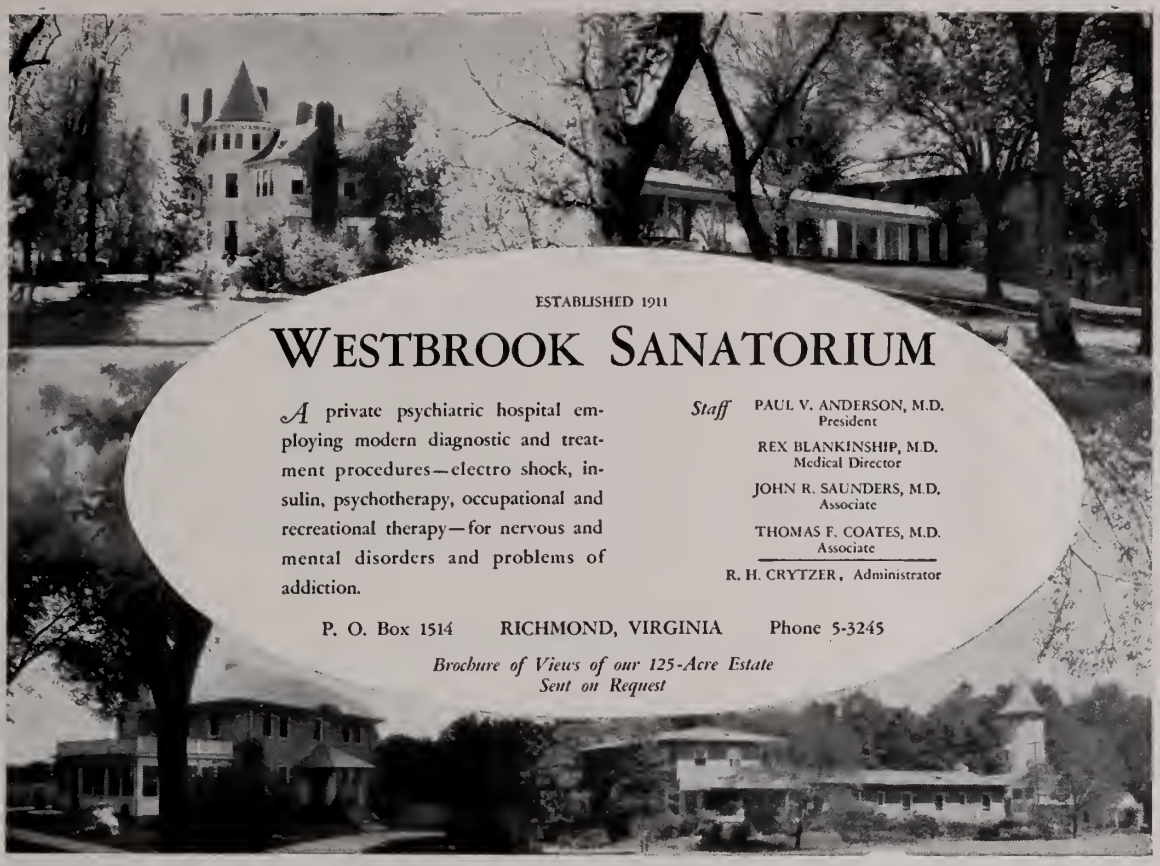
Centrally located in Historic Fredericksburg, on the beautiful Rappahannock, in the former Mary Washington Hospital Building. Completely redecorated and refurnished.

Eighty Bed Capacity

Medical Supervision

Inspection Invited

Rates:
$30.00 to $75.00 per week



ESTABLISHED 1911

WESTBROOK SANATORIUM

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

Staff PAUL V. ANDERSON, M.D.
President

REX BLANKINSHIP, M.D.
Medical Director

JOHN R. SAUNDERS, M.D.
Associate

THOMAS F. COATES, M.D.
Associate

R. H. CRYTZER, Administrator

P. O. Box 1514 RICHMOND, VIRGINIA Phone 5-3245

Brochure of Views of our 125-Acre Estate Sent on Request

SAINT ALBANS

A PRIVATE PSYCHIATRIC HOSPITAL

RADFORD, VIRGINIA



STAFF

James P. King, M. D., Director

James K. Morrow, M. D. Thomas E. Painter, M. D. Daniel D. Chiles, M. D.

James L. Chitwood, M. D., Medical Consultant

Affiliated Clinic Offering Psychiatric and Psychological Evaluation and Therapy:

BLUEFIELD MENTAL HEALTH CENTER

1400 Bland Street **Bluefield, W. Va.**

David M. Wayne, M. D., Director

TUCKER HOSPITAL Inc.

212 West Franklin Street,

Richmond, Virginia

A private hospital accepting for diagnosis and treatment organic neurological conditions, selected psychiatric and alcoholic cases, metabolic disturbances of an endocrine nature, individuals who are having difficulty with their personality adjustments, and children with behavior problems. Patients with general medical disorders admitted for treatment under our staff of visiting physicians.

Under the Professional Charge of

DR. HOWARD R. MASTERS, DR. JAMES ASA SHIELD
AND ASSOCIATES

Appalachian Hall • Asheville, North Carolina

ESTABLISHED 1916



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, SR., M.D.
Diplomate in Psychiatry
WM. RAY GRIFFIN, JR., M.D.

MARK A. GRIFFIN, SR., M.D.
Diplomate in Psychiatry
MARK A. GRIFFIN, JR., M.D.

For rates and further information write APPALACHIAN HALL, ASHEVILLE, N. C.

A Modern Hospital for the Treatment of Alcoholism Exclusively

- A private hospital offering scientific, institutional, medical, psychological, reflex, reduction and other methods for the rehabilitation of consent patients suffering from alcoholism.

- All equipment modern with facilities to take care of 50 patients both male and female.

- Under the direction of a competent licensed M. D. with five consultant physicians subject to call. Registered Nurses in charge 24 hours daily.



Approved and licensed by the Virginia State Hospital Board. Atop beautiful Mt. Regis, five miles West of Roanoke, on Highway 11, in the quiet serene mountains of Virginia, conducive to rest, comfort and recuperation. Doctors inspection invited. For information phone or write.

WHITE CROSS HOSPITAL

Five Miles West of Roanoke on Route No. 11.
Salem, Virginia — Phone Salem 287

WHITE CROSS HOSPITAL

Copyright 1948. H. N. Alford, Atlanta, Ga.

JOHNSTON-WILLIS
HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

Medical College of Virginia
HOSPITAL DIVISION
RICHMOND, VIRGINIA

A health center using the latest methods of diagnosis and treatment of disease.

MEDICAL COLLEGE OF VIRGINIA HOSPITAL
OUT-PATIENT DEPARTMENT
SAINT PHILIP HOSPITAL
DOOLEY HOSPITAL

The patient's welfare is our primary interest.

C. P. CARDWELL, JR., *Director*

The . . . Thompson Homestead School

FOR EXCEPTIONAL CHILDREN

Year round private home and school for infants, children and adults on pleasant 250 acre farm near Charlottesville.

Write for booklet.

MRS. J. BASCOM THOMPSON, *Principal*

FREE UNION VIRGINIA

The State Board of Medical Examiners of Virginia

The next meeting of the Board will be held at the Richmond Hotel, Richmond, Virginia, June 15, 1955, and the examinations will be held at the same hotel June 16 to 18, inclusive. June 1st is the deadline for receipt of applications for the examination and documents and papers to be discussed and acted upon by the Board. The secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

THE KEELEY INSTITUTE
447 W. Washington St.
GREENSBORO,
NORTH CAROLINA

Out-Patient Clinic
And Hospital For Rehabilitation Of The ALCOHOLIC

A. F. Fortune, MD: Medical Director
Ben F. Fortune, MD: Associate Medical Director
R. H. Dovenmuehle, MD: Consultant in Psychiatry

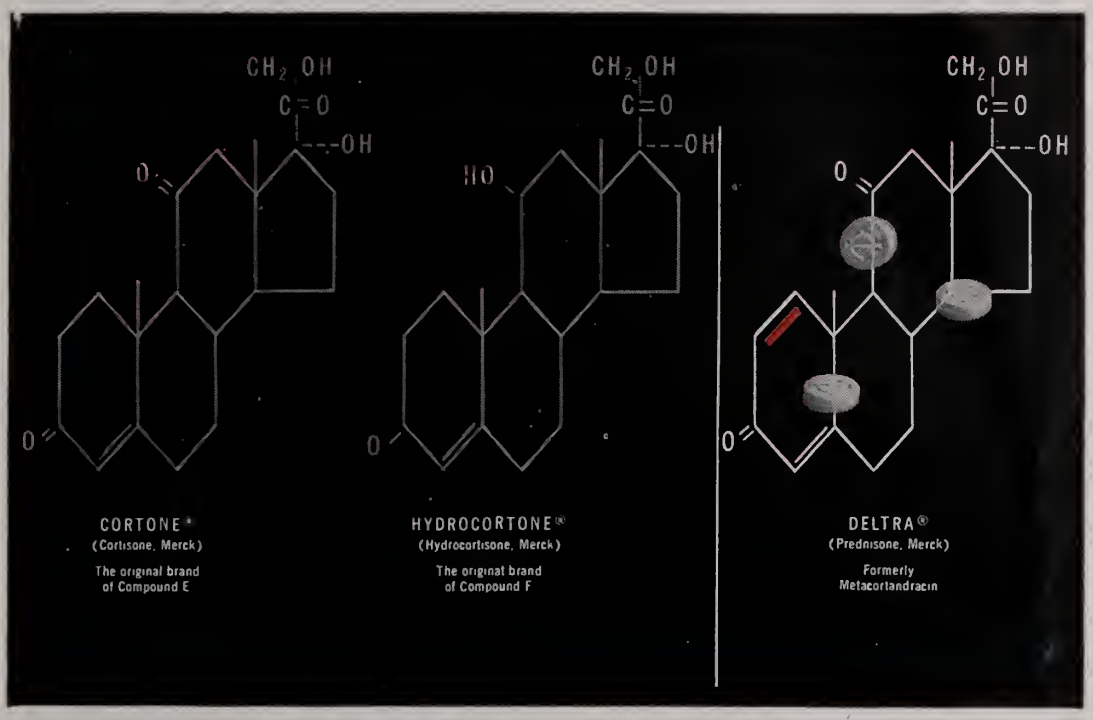
In-patients are accepted in state of acute alcoholism. No waiting period required.

Registered by American Medical Association

DELTRA® TABLETS

(PREDNISONE, MERCK)

(FORMERLY METACORTANDRACIN)



DELTRA is the Merck brand of the new steroid, prednisone

(FORMERLY METACORTANDRACIN)

DELTRA is a new synthetic analogue of cortisone. DELTRA produces anti-inflammatory effects similar to cortisone, but therapeutic response has been observed with considerably lower dosage. With DELTRA, favorable results have been reported in rheumatoid arthritis with an initial daily dosage of 20 to 30 mg. and a daily maintenance dose range between 5 and 20 mg.

Salt and water retention are less likely with recommended doses of DELTRA than with the higher doses of cortisone required for comparable therapeutic effect.

Indications for DELTRA: Rheumatoid arthritis, bronchial asthma, inflammatory skin conditions.

SUPPLIED: DELTRA is supplied as 5 mg. tablets (scored) in bottles of 30.

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

The Indian sang his death song



100 YEARS AGO, during a frontier skirmish, an Indian brave, singing his own death song, charged down on a young officer. Lieutenant George Crook, 4th Infantry, coolly fell to one knee, carefully aimed, and dropped the brave in his tracks.

It was not Crook's first Indian, nor his last. By the time he made general, Crook was the greatest Indian-fighter this country has ever had.

Yet, he was also one of the best friends the Indians have ever had. For he understood them well, dealt fairly and firmly, and always kept his promises.

When Crook died, Indians wept. And a Sioux chief named Red Cloud said: "He never lied to us. His words gave the people hope."

No nation can ever have enough men like George Crook. But America had, and still has, a lot of them. That's important to remember. Because it is a wealth of human character rather than a wealth of money that gives America its real worth. Just as it is the Americans, all 160 million of them, standing behind our country's Savings Bonds, who make these Bonds one of the world's finest investments.

For your sake—and America's—why not take advantage of this fact? Invest in—and hold—United States Savings Bonds.



It's actually easy to save money—when you buy United States Series E Savings Bonds through the automatic Payroll Savings Plan where you work! You just sign an application at your pay office; after that your saving is done for you. And the Bonds you receive will pay you interest at the rate of 3% per year, compounded semiannually, for as long as 19 years and 8 months if you wish! Sign up today! Or, if you're self-employed, invest in Bonds regularly where you bank. There's no surer place to put your money, for United States Savings Bonds are as safe as America!

Safe as America – U.S. Savings Bonds

The U. S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.

PUBLIC SERVICE ADVERTISING COUNCIL

5 1-2 x 8 in. 100 Screen



NOW *happy travelers chew*

Bonamine*HCl

Brand of meclizine hydrochloride

chewing tablets

Probably 30 to 50% of all travelers experience some degree of pleasure-spoiling malaise, anorexia, nausea, and vertigo. For these motion-sensitive vacationers, you can prescribe new BONAMINE CHEWING TABLETS to insure happier travel, no matter what the method of transportation.

For the convalescent or the invalid traveling for his health, BONAMINE helps to avoid the strain imposed by vertigo, nausea and vomiting. Also indicated for control of nausea, vomiting and vertigo associated with labyrinthine and vestibular disturbances, Menière's syndrome and radiation therapy.

BONAMINE rarely causes drowsiness or other unwanted reactions.

Supplied on prescription only:

CHEWING TABLETS (New) — 25 mg., candy-coated, mint-flavored. Packages of 8.

TABLETS — 25 mg., scored and tasteless. Boxes of 8 and bottles of 100 and 500.

*TRADEMARK

Pfizer

PFIZER LABORATORIES, Brooklyn 6, N. Y.
Division, Chas. Pfizer & Co., Inc.



The Best Tasting Aspirin you can prescribe

The Flavor Remains Stable down to the last tablet

Bottle of 24 tablets 15¢ (2½ grs. each)

We will be pleased to send samples on request

THE BAYER COMPANY DIVISION of Sterling Drug Inc., 1450 Broadway, New York 18, N. Y.

Upjohn
KALAMAZOO



*Trademark for the Upjohn brand of prednisolone (delta-l-hydrocortisone)

Complete
Printing and Binding Service

Commercial, Book and Job Work, Catalogues—Publications
Advertising Literature, Booklets—Broadsides
Office and Factory Forms
Loose-Leaf and Manifold Forms—Ledger Leaves and Loose-Leaf Binders
Paper Ruling
Complete Binding Equipment

Complete Service Under One Roof

Aequaint us with your requirements. We serve you efficiently and economically.

Dial 3-1881

WILLIAMS PRINTING CO.

11-13-15 North Fourteenth Street **RICHMOND, VIRGINIA**



To Relieve
Nasal Congestion in HAY FEVER

Neo-Synephrine promptly constricts engorged capillaries thus reducing swelling and "bogginess" of the allergic nasal mucosa.

Neo-Synephrine's dependable vasoconstrictive effect also helps to stop local irritation and sneezing. No central stimulating effect, no drowsiness.

Used with undiminished effectiveness throughout an attack of allergic rhinitis, Neo-Synephrine may prevent complications — sinusitis, nasal polyps or even asthma, which may result from inadequate sinus drainage and chronically blocked nasal passages.

NEO-SYNEPHRINE®
hydrochloride

DOSAGE FORMS

Solutions: 0.25% — 0.25% (aromatic) — 0.5% — 1% —
Emulsion 0.25% — Jelly 0.5%
Nasal Spray 0.5% (plastic, unbreakable squeeze bottle)
Nasal Spray Pediatric 0.25% ***(new introduction)***
Contains Zephiran® Cl 0.02% (1:5000), antibacterial wetting agent and preservative for greater efficiency.

Winthrop-Stearns INC.
NEW YORK 18, N. Y. WINDSOR, ONT.

Neo-Synephrine (brand of phenylephrine) and Zephiran (brand of benzalkonium chloride — refined), trademarks reg. U. S. Pat. Off.

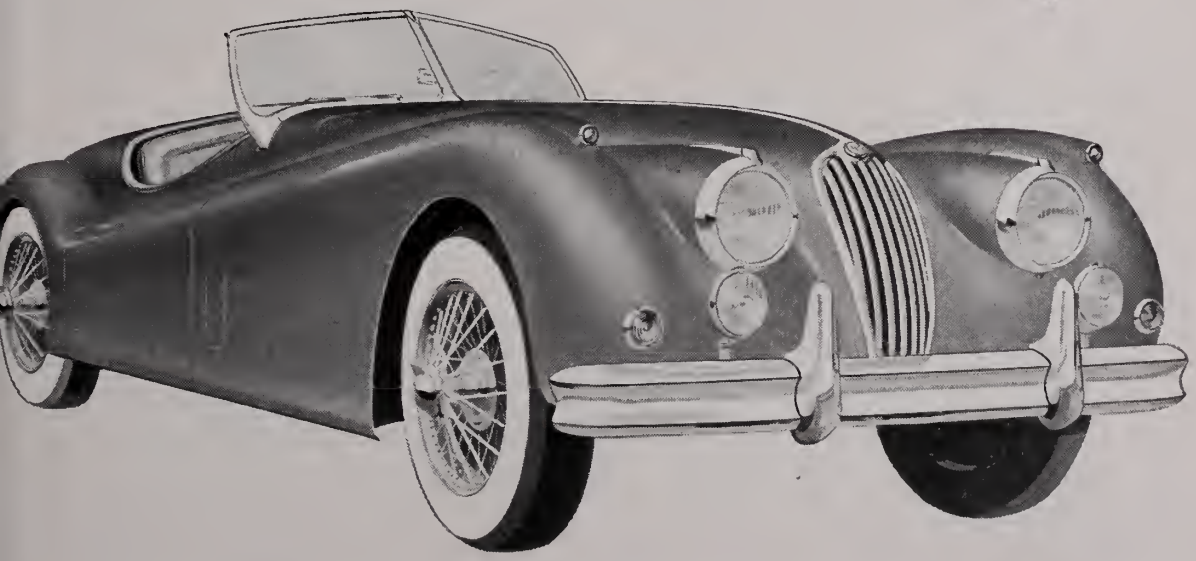
spice for life...

Developed in the toughest international races,
Jaguar is not only the world's fastest production car
... and the safest ... but the most fun to drive!
With its famed XK-140 engine,
now even more powerful ...
precision race car rack-and-pinion steering ...
oversize racing brakes ... enlarged cockpit
for greater comfort, Jaguar adds spice
to your life, fun to your driving!

Note: *Recently, a production model Jaguar was driven 7 days and 7 nights ... 16,851 miles at an average speed of over 100 mph. Yet after this grueling test technicians found it could pass new car inspection!*

JAGUAR

the finest car of its class in the world



XK-140 Sports Roadster.
Also, in Convertible and Coupe—now with 2 occasional seats in rear—and Mark VII-M Family Sports Sedan.
Going abroad? See your Jaguar dealer about money-saving overseas delivery.

HARPER MOTORS, INC.
901 Preston Avenue
CHARLOTTESVILLE, VA.
Tel. 28191

FOREIGN CAR DIST. INC.
806 Granby Street
NORFOLK, VA.
Tel. 40663

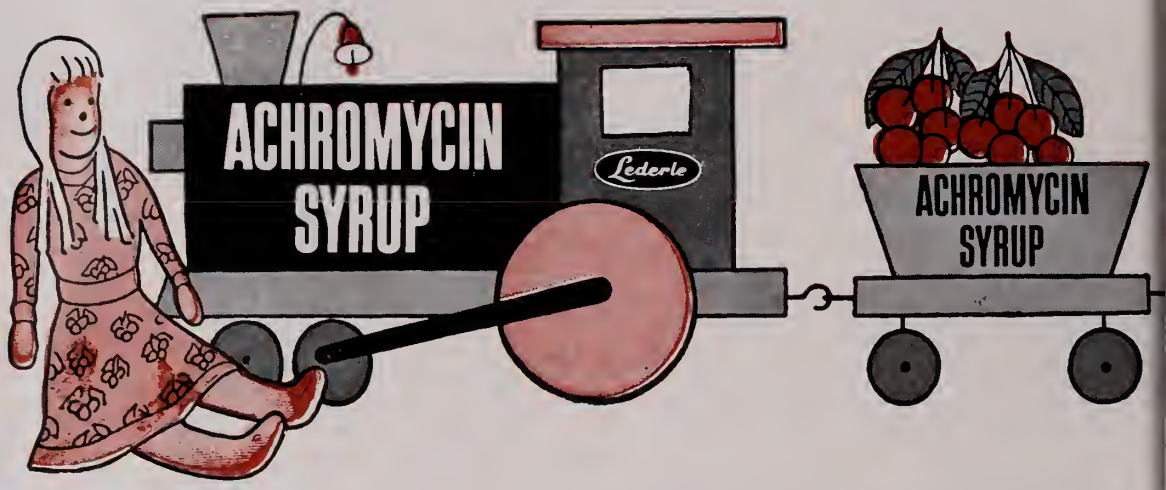
IMPERIAL MOTORS OF FAIRFAX
Route 29
Nr. FALLS CHURCH, VA.
Tel. Jefferson 13302

IMPERIAL CAR DISTRIBUTORS, INC., Academy and Washington, HAMPTON, VA. Tel. 4383

PLEASANT CHERRY FLAVOR!

125 MG. PER 5 CC. TEASPOONFUL! NO REFRIGERATION!

AQUEOUS—NO OIL.



ACHROMYCIN*

HYDROCHLORIDE

TETRACYCLINE HCl Lederle

OTHER FORMS OF ACHROMYCIN FOR PEDIATRIC USE:

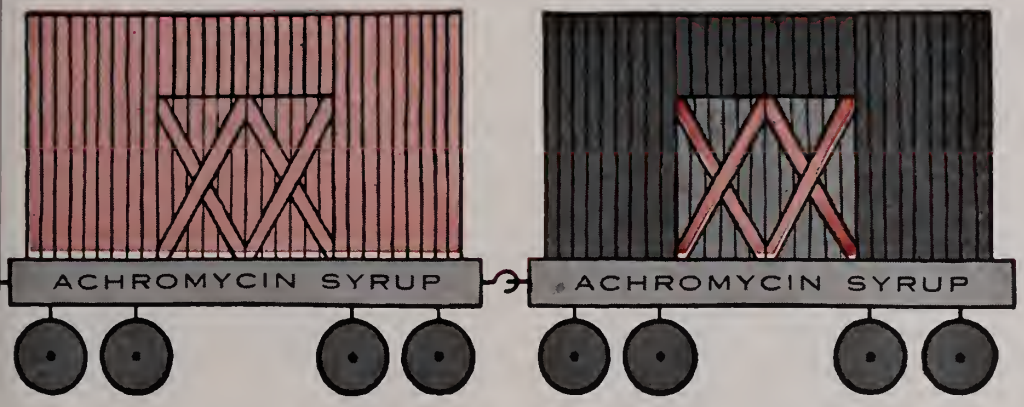
PEDIATRIC DROPS (Cherry Flavor): 100 mg. per cc. (approx. 5 mg. per drop)

ORAL SUSPENSION (Cherry Flavor): 250 mg. per teaspoonful (5 cc.)

SPERSOIDS* Dispers'ble Powder (Chocolate Flavor): 50 mg. per rounded teaspoonful (3 Gm.)

READY TO USE! IN 2 OZ. BOTTLES!

NO AFTERTASTE! MISCIBLE WITH WATER, MILK, SODA!



SYRUP

ACHROMYCIN • broad-spectrum • rapid diffusion • prompt control of infection • well tolerated • effective against Gram-positive and Gram-negative bacteria, rickettsiae, and certain viruses and protozoa.

Today's most widely prescribed broad-spectrum antibiotic, tested and accepted by foremost medical authorities, produced and marketed by Lederle.

Lederle

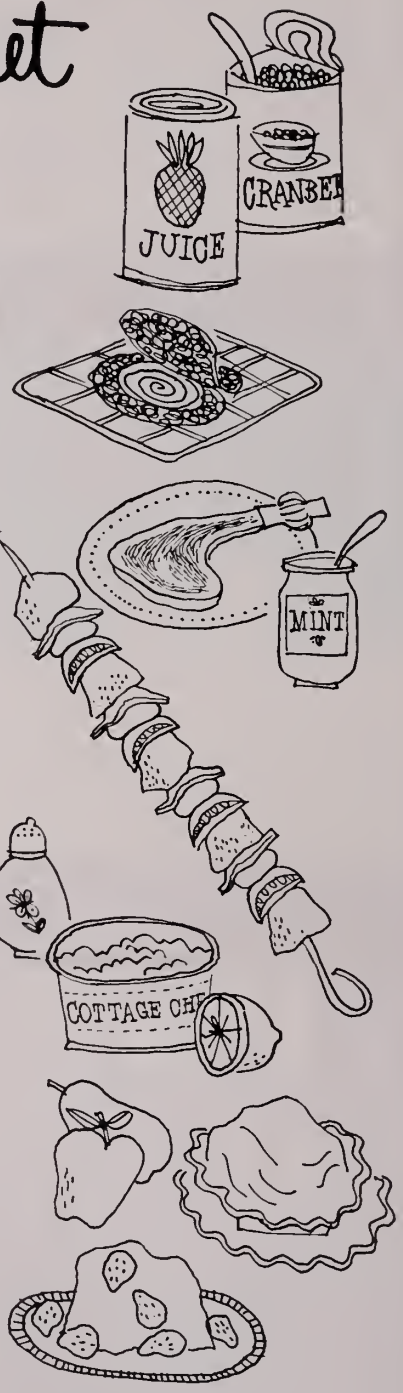
LEDERLE LABORATORIES DIVISION

AMERICAN Cyanamid COMPANY Pearl River, New York

®R. G. U.S. PAT. OFF.

"Taste Appeal" for the Low-Fat Low-Cholesterol Diet

Palatability is the key to planning this diet. And these flavor tips will help you keep in the "taste appeal" your patient must have and still keep out the rich foods he cannot have.



These are for flavor—

Cranberry and tomato sauce pinch-hit for gravy. Fruit juices are to baste with as well as to drink. And herbs and spices lend a fine aroma to meats and vegetables.

Here's where they go—

Meat loaf can sport a gay cap of whole-cranberry sauce, while hamburgers make a surprise party when a slice of pickle or onion is sealed between two thin patties. Your patient can baste chicken with lemon or orange juice—glaze lamb chops with mint jelly. Lean meats, broiled or baked, are made savory with herbs. And barbecued kabobs add something different.

Most vegetables can be dressed simply with lemon juice or an herb vinegar. And tomato halves come out from under the broiler bubbly with brown sugar and sweet basil on top.

On green salads, cottage cheese thinned with lemon juice, sparked with paprika, makes the dressing. And on fruits, try lemon juice, honey and chopped mint.

For dessert, angel cake or meringue shells go nicely under fruits—skim milk powder makes the "whipped cream." Snow pudding is a simple dessert—fresh fruit, even more so. And for a change, your patient may like his fruit baked in grape or cranberry juice.

The diet, of course, will be balanced nutritionally at a suitable calorie level. And these "diet do's" will help keep your patient happy within the limits you set for his diet.

United States Brewers Foundation

Beer—America's Beverage of Moderation

Fat—0; Calories 104/8 oz. glass (AVERAGE OF AMERICAN BEERS)

If you'd like reprints of 12 different diets, please write United States Brewers Faundatian, 535 Fifth Avenue, New Yark 17, N. Y.

One of a Series of Newspaper Ads Directed to Your Patients and Our Customers....

PEOPLES DRUG STORES INC

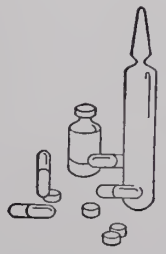
THANKS TO YOUR DOCTOR

your "losing" battle turns into a winning one



It's smart (and healthy) to bring your weight down to normal, but be sure to "put your doctor in your diet." Aware of your daily vitamin, mineral and calorie requirements, your doctor can determine the rate of reduction suited to your situation.

If he prescribes a new weight-reduction drug, you can be sure Peoples has it —and will dispense it quickly and accurately. And, of course, your prescription is priced with uniform economy at Peoples Service Drug Store.



PEOPLES *Certified* **PRESCRIPTIONS**

AT ALL PEOPLES SERVICE DRUG STORES

...just what the doctor ordered

© 1955 PEOPLES DRUG STORES, INC.

for strong, sturdy, solid growth

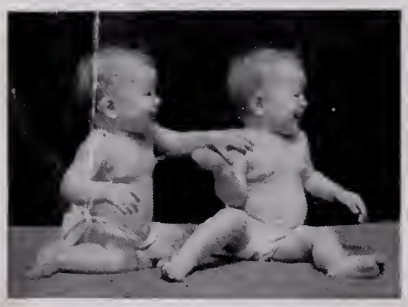
Lactum



LIQUID OR
POWDERED

NUTRITIONALLY SOUND FORMULA FOR INFANTS

Lactum®-fed babies get all the proved benefits of a cow's milk and Dextri-Maltose® formula. Mothers appreciate the convenience and simplicity of this ready-prepared formula. Physicians are assured the important protein margin of safety for sturdy growth.





Lactum-fed babies are typically sturdy babies because Lactum supplies ample protein for sound growth and development.

The generous protein intake of babies fed milk and carbohydrate formulas such as Lactum promotes the formation of muscle mass. It also provides for good tissue turgor and excellent motor development.[1]

(1) Jeans, P. C., in A. M. A. Handbook of Nutrition, ed. 2, Philadelphia, Blakiston, 1951, pp. 275-278.

MEAD

SYMBOL OF SERVICE TO THE PHYSICIAN

MEAD JOHNSON & COMPANY · EVANSVILLE, INDIANA, U.S.A.

FFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

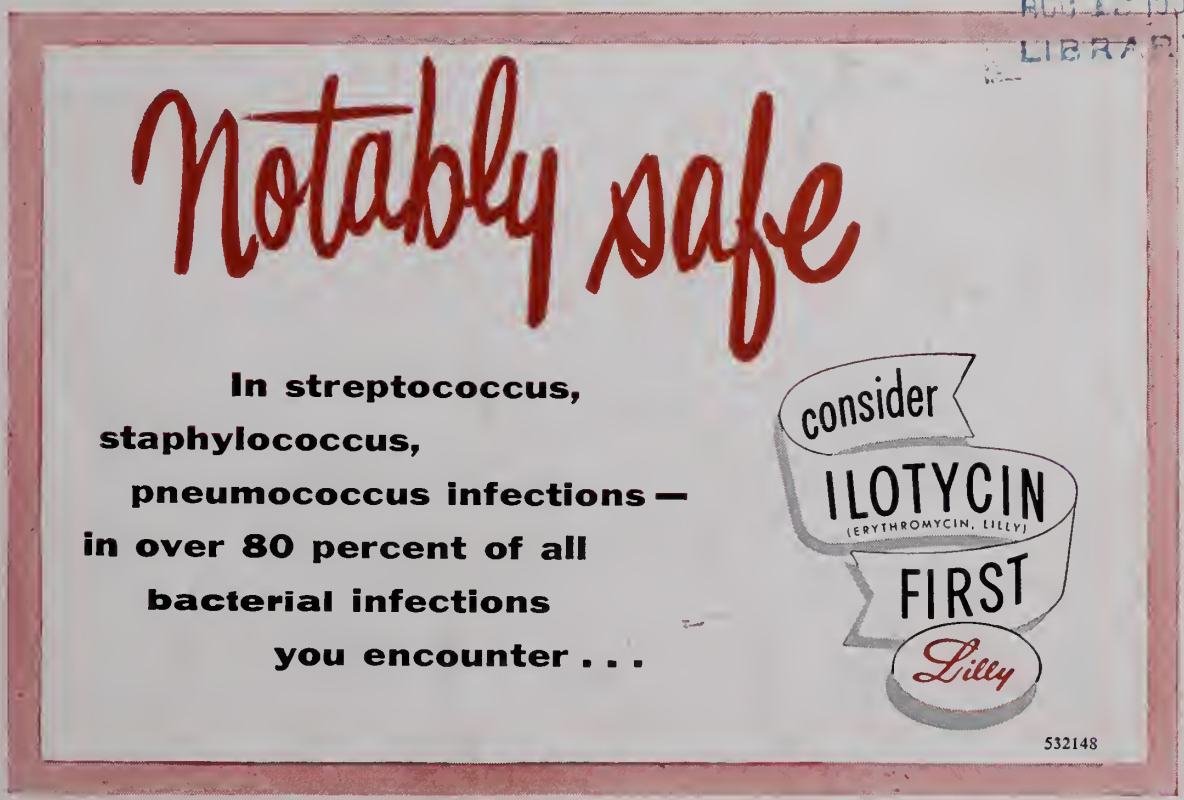
VIRGINIA MEDICAL MONTHLY

Contents

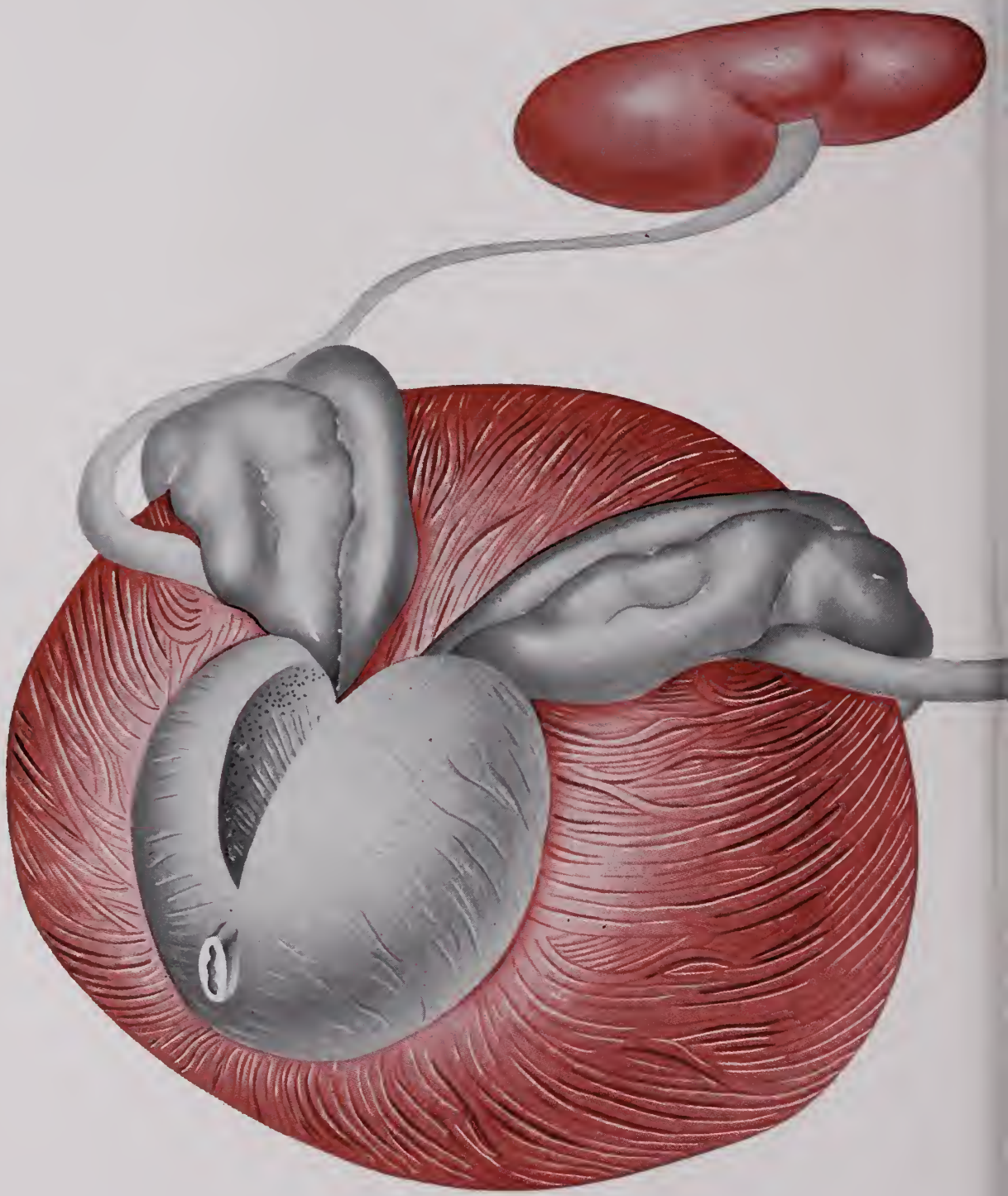
Jaundice Associated with Chlorpromazine, James O. Burke, Nathan Bloom and Harley Davidson . . . 339
Arteriomesenteric Duodenal Obstruction, Charles F. Schneider and Andrew F. Giesen . . . 342
The Diagnosis, Etiology, and Treatment of Hiatal Esophageal Hernia, Porter P. Vinson . . . 346
Further Experiences with the Femoral Head Prosthesis in Fractures and Arthritis of the Hips, George A. Duncan, George G. Hollins, Jr. and John S. Thiemeyer, Jr. . . . 349
Leukemoid Reactions: Four Brief Case Reports, O. B. Bobbitt and W. E. Bray . . . 351
The Treatment of Peripheral Vascular Diseases—Diseases of the Veins, Eugene L. Lowenberg . . . 354
A New Approach to Laryngotracheobronchitis, Charles Preston Mangum . . . 361
The Lumbar Puncture, Edgar N. Weaver . . . 363

(Continued on page 6)

OF MEDICINE
AUG 15 1955
LIBRARY



in severe urinary tract infections



›road-spectrum, outstanding efficacy



Chloromycetin®

for today's problem pathogens

Because of increased frequency of resistance of pathogenic microorganisms to available antibiotics,[1,2] sensitivity studies provide criteria helpful in selection of the most effective agent. Recent *in vitro* studies and clinical experience emphasize the outstanding efficacy of CHLOROMYCETIN (chloramphenicol, Parke-Davis) against microorganisms commonly encountered in patients with severe urinary tract infections.[1-8] "For severe urinary infections, chloramphenicol has the broadest spectrum and is the most effective antibiotic."[1]

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

References (1) Jones, C. P.; Carter, B.; Thomas, W. L., & Creadick, R. N.: *Obst. & Gynec.* 5:365, 1955. (2) Balch, H. H.: Mil. Surgeon 115:419, 1954. (3) Altemeier, W. A.; Culbertson, W. R.; Sherman, R.; Cole, W., & Elstun, W.: *J.A.M.A.* 157:305, 1955. (4) Kutscher, A. H.; Sequin, L.; Lewis, S.; Firo, J. D.; Zegarelli, E. V.; Rankow, R., & Segall, R.: *Antibiotics & Chemotherapy* 4:1023, 1954. (5) Clapper, W. E.; Wood, D. C., & Burdette, R. I.: *Antibiotics & Chemotherapy* 4:978, 1954. (6) Sanford, J. P.; Favour, C. B.; Harrison, J. H., & Mao, F. H.: *New England J. Med.* 251:810, 1954. (7) Sanford, J. P.; Favour, C. B., & Mao, F. H.: *J. Lab. & Clin. Med.* 45:540, 1955. (8) Felshin, G.: *J. Am. M. Women's A.* 10:51, 1955.

MEDICAMENTA VERA · PD & CO.

PARKE, DAVIS & COMPANY DETROIT, MICHIGAN

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April 1874)

Published monthly by The Medical Society of Virginia.

PUBLICATION COMMITTEE

Lewis H. Bosher, Jr., M.D., *Chairman and Editor*
Wyndham B. Blanton, M.D. Lloyd B. Burk, M.D.
with
EDITORIAL BOARD
J. Morrison Hutcheson, M.D.
Cato Drash, M.D.
Ennion S. Williams, M.D.
A. Brownley Hodges, M.D.
Hugh H. Trout, Jr., M.D.

The MONTHLY is not responsible for the opinions and statements of its contributors.

All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

Managing Editor—E. SPENCER WATKINS
1105 West Franklin Street, Richmond 20.

Annual Subscription—$2.00 Single Copies—25¢

Second-class mail privileges authorized at Richmond, Virginia

THE MEDICAL SOCIETY OF VIRGINIA

OFFICERS

President—CARRINGTON WILLIAMS, M.D., Richmond

President-Elect—JAMES P. KING, M.D., Radford

Vice-Presidents—JAMES W. LOVE, M.D., Alexandria
WAVERLY R. PAYNE, M.D., Newport News
BENJAMIN W. RAWLES, JR., M.D., Richmond

Executive Secretary-Treasurer—ROBERT I. HOWARD, Richmond

Councilors—A. A. CREECY, M.D., Newport News
WALTER P. ADAMS, M.D., Norfolk
GUY W. HORSLEY, M.D., Richmond
W. J. OZLIN, M.D., South Hill
L. P. BAILEY, M.D., Nathalie
FRANK A. FARMER, M.D., Roanoke
H. W. MILLER, M.D., Woodstock
MCLEMORE BIRDSONG, M.D., Charlottesville
JAMES P. WILLIAMS, M.D., Richlands
HARRY C. BATES, JR., M.D., Arlington

Delegates to A.M.A.
J. M. HUTCHESON, M.D., Richmond
VINCENT W. ARCHER, M.D., Charlottesville

Alternate Delegates to A.M.A.
ALLEN BARKER, M.D., Roanoke
W. LINWOOD BALL, M.D., Richmond

Executive Office—1105 W. Franklin St., Richmond 20.

INDEX TO ADVERTISERS

Abbott ---- 18, 40
Ames Company, Inc. ---- 45
Appalachian Hall ---- 33
Aquafilter Corporation ---- 5
Ayerst ---- 6
Burroughs Wellcome & Co., Inc. ---- 42, 43
Coca-Cola ---- 21
Corn Products Refining Company ---- 38
Davies, Rose & Co., Ltd. ---- 41
Foot-so-Port Shoe Company ---- 35
Garst Bros. Dairy Inc. ---- 35
Gill Memorial Eye, Ear and Throat Hospital, Inc. ---- 28
Imperial Car Distributors, Inc. ---- 9
Jefferson, A. G. ---- 42
Johnston-Willis Hospital ---- 26
Keeley Institute, The ---- 26
Lakeside Laboratories, Inc. ---- 7
Lederle Laboratories Division ---- 17
Lily and Company, Eli ---- 24
McGuire Clinic—St. Luke's Hospital ---- 27
Mead Johnson & Company ---- 46
Medical College of Virginia ---- 26
Medical Society of Virginia, The—Annual Meeting ---- 35
Medical Society of Virginia, The ---- 4
New York Polytechnic Medical School and Hospital, The ---- 11
Parke, Davis & Company ---- 2-3
Patterson's Safe Service Drug Stores ---- 35
Peoples Drug Stores Inc. ---- 20
Pfizer & Co., Inc., Chas. ---- 10, 44
Plyler's Nursing Home, Mrs. ---- 30
Richmond Eye Hospital—Richmond Ear, Nose and Throat Hospital ---- 29
Richmond Hotels Incorporated ---- 42
Riverside Convalescent Home ---- 29
Riverside Hospital ---- 28
Saint Albans ---- 32
Schering ---- 12-13, 22-23
Schieffelin & Company ---- 6
Sealy Mattress Company ---- 43
Searle & Co., G. D. ---- 25
Sharp & Dohme ---- 8, 36
State Board of Medical Examiners of Virginia, The ---- 26
St. Elizabeth's Hospital ---- 30
Stuart Circle Hospital ---- 31
Terrace Hill Nursing Home ---- 27
Thompson Homestead School, The ---- 26
Tucker Hospital Inc. ---- 33
United States Brewers Foundation ---- 19
Upjohn ---- 11, 21, 31, 39
Viceroy Cigarettes ---- 14
Virginia Bakers Council, The ---- 37
Virginia Medical Monthly ---- 4
Westbrook Sanatorium ---- 32
White Cross Hospital ---- 34
Williams Printing Co. ---- 39, 41
Winthrop-Stearns Inc. ---- 15

NEWS

for every Doctor who smokes
for every patient who seeks smoking advice

NEW WATER-ACTIVATED FILTER REMOVES UP TO 92% OF NICOTINE, 76% OF TARS FROM ANY CIGARETTE, PLAIN OR FILTER-TIP*

Uses Oriental "Hookah" Technique to Cleanse, Cool Smoke, Leaving Full Tobacco Taste and Flavor

Aquafilter, the unique water-activated filter, offers a new, practical approach to the problem of how to limit and control nicotine and tar intake without reducing the pleasure of smoking.

HOW *Aquafilter* WASHES OUT NICOTINE AND TARS

The AQUAFILTER, a replaceable cartridge of absorbent material, holds about one milliliter of water—enough to trap three to four times its weight in nicotine. Acting as a miniature condenser, the AQUAFILTER chills gaseous nicotine to the liquid phase. At the same time it strips the smoke of tars.

The mainstream of smoke from the average king size cigarette, in tests conducted under standards established by the U. S. Government, shows only 8% of nicotine and 24% of tars passing through the AQUAFILTER. Temperature of smoke is lowered three to four times more effectively than by any other smoking method tested.*

*Independent testing laboratory reports available on request.



The AQUAFILTER will soon be available throughout the United States and Canada

Aquafilter CORPORATION • 270 Park Avenue • New York 17, N. Y.

"Premarin" relieves menopausal symptoms with virtually no side effects, and imparts a highly gratifying "sense of well-being."

"Premarin"®—Conjugated Estrogens (equine)

5511

In very special cases
A very superior Brandy



SPECIFY ★ ★ ★

HENNESSY

THE WORLD'S PREFERRED COGNAC BRANDY
84 PROOF Schieffelin & Company, New York, N.Y.

MEDICINE IN VIRGINIA

17th, 18th and 19th Centuries

Reduced Price to Members of
The Medical Society of Virginia
3 Volumes for $5.75

Order Through
THE MEDICAL SOCIETY OF VIRGINIA
P. O. Box 5085 Richmond 20, Va.

CONTENTS
(Continued)

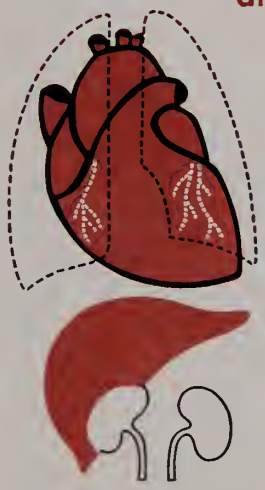
Mental Health	366
Medico-Legal Notes	370
Public Health	372
Woman's Auxiliary	373
President's Message	374
Editorial	375
Society Proceedings	377
News	378
Obituaries	380

INDEX TO ADVERTISERS—Page 4

Entered as Second Class Matter at the Postoffice, Richmond, Va.

does your diuretic cause acidosis?

know your diuretic



diuresis without depletion of alkaline reserve—avoiding dangers of acid-base imbalance—is characteristic of the organomercurials. In contrast, the diuretic activity of carbonic anhydrase inhibitors, acidifying salts, and the resins depends on production of acidosis.

TABLET

NEOHYDRIN®

BRAND OF CHLORMERODRIN

(18.3 MG. OF 3-CHLOROMERCURI -2-METHOXY-PROPYLUREA IN EACH TABLET)

- action not dependent on production of acidosis
- no "rest" periods... no refractoriness

a standard for initial control of severe failure

MERCUHYDRIN®

BRAND OF MERALLURIDE INJECTION SODIUM

Leadership in diuretic research

Lakeside LABORATORIES, INC., MILWAUKEE 1, WISCONSIN

88755

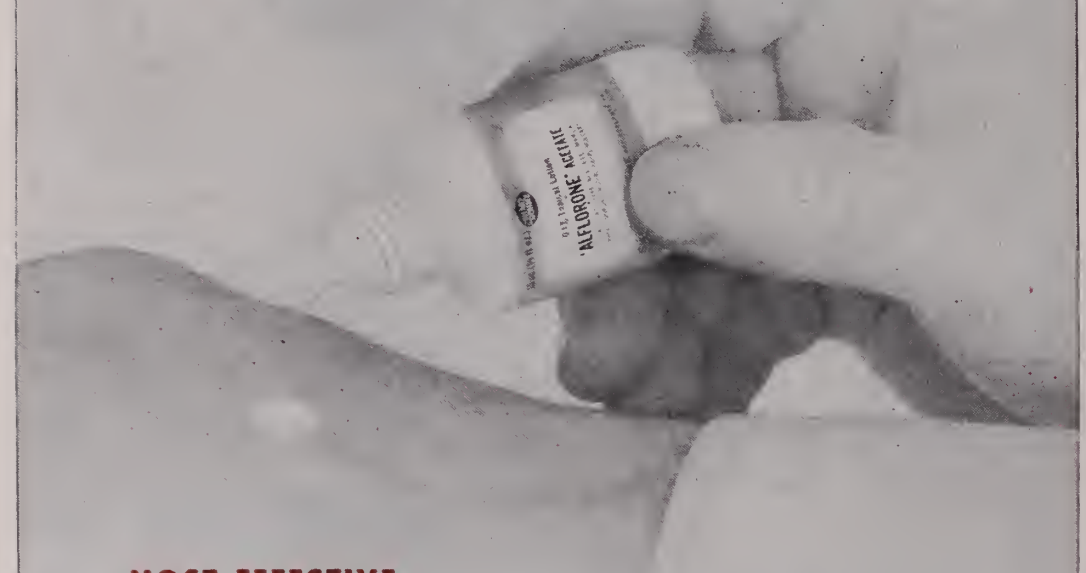
WEIGHT FOR WEIGHT,
THE MOST ACTIVE ANTI-INFLAMMATORY
AGENT YET DEVELOPED
FOR TOPICAL USE

TOPICAL LOTION

'ALFLORONE'

ACETATE

(FLUDROCORTISONE ACETATE, MERCK) 9 ALPHA-FLUOROHYDROCORTISONE ACETATE



MOST EFFECTIVE
Therapeutically active in 1/10th the concentration of hydrocortisone (Compound F).

MOST ECONOMICAL
Superior spreading qualities—a small quantity covers a wide area.

MOST ACCEPTABLE
Most patients prefer the cosmetic advantages of this easy-to-apply, smooth spreading lotion.

Supplied in a cosmetically elegant base in two concentrations: 0.25% and 0.1% in 15 cc. plastic squeeze bottles.
Also available: Alflorone Topical Ointment in 5 gm. tubes—two concentrations—0.25% and 0.1%.

SHARP & DOHME
Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

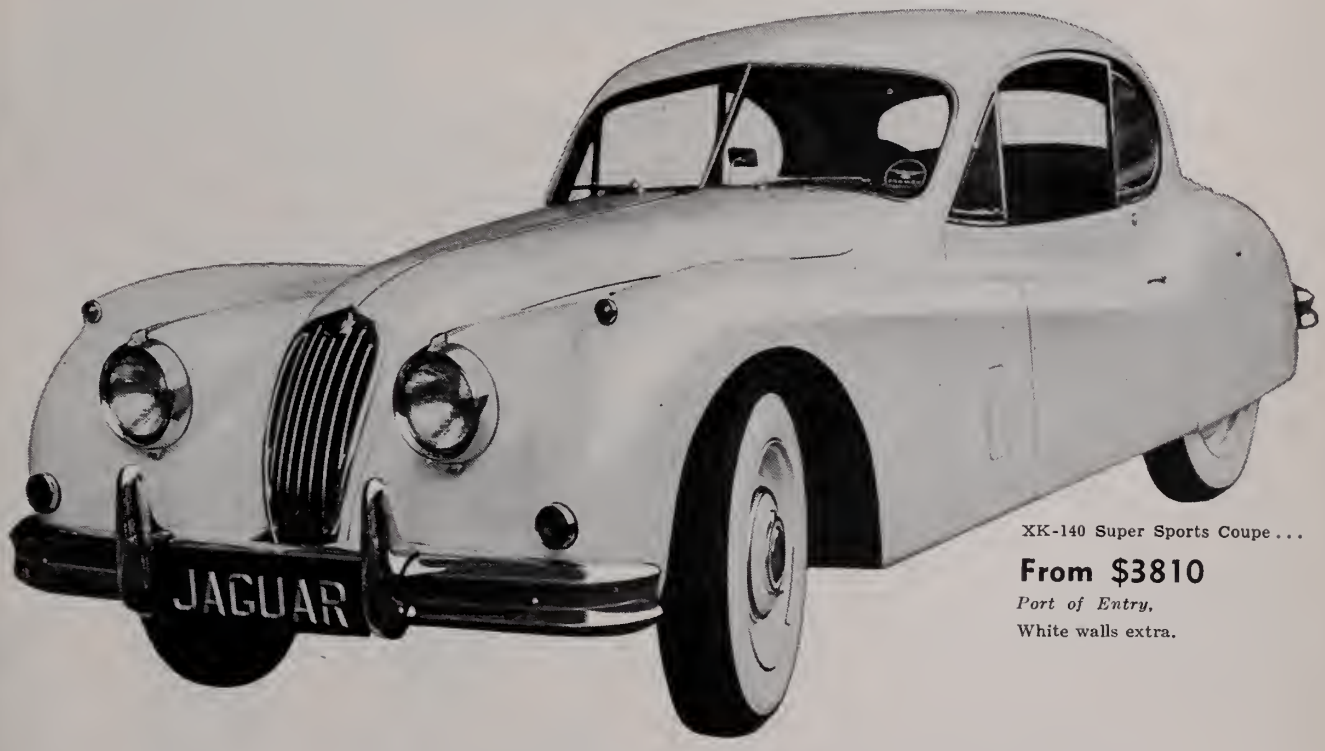
The very attributes that make Jaguar the world's foremost sports car make it particularly suitable to *your* exacting profession.

The speed that brought Jaguar home a winner in over 46 major races . . . for your emergency calls. Maneuverability . . . that weaves you through the worst traffic. Oversize racing brakes . . . for quick stops and safety under all conditions. Dependability . . . so necessary in your active practice.

For instance, a Jaguar hard top coupe was driven 7 continuous days and nights . . . 16,851 non-stop miles . . . at an average speed of over 100 m.p.h. Yet after this grueling test, technicians found it would have passed new car inspection!

just what the doctor ordered!

The new Jaguar coupe . . . with its quiet good looks, world renowned XK-140 engine and very much enlarged space behind the front seat . . . is truly Rx for *you!* Arrange for a demonstration today!



XK-140 Super Sports Coupe . . .

From $3810

Port of Entry,
White walls extra.

JAGUAR

the finest car of its class in the world

HARPER MOTORS, INC.
901 Preston Avenue
CHARLOTTESVILLE, Va.
Tel. 28191

FOREIGN CAR DIST. INC.
806 Granby Street
NORFOLK, Va.
Tel. 40663

IMPERIAL MOTORS OF FAIRFAX
Route 29
Nr. FALLS CHURCH, Va.
Tel. Jefferson 43302

IMPERIAL CAR DISTRIBUTORS, INC. Academy and Washington, HAMPTON, Va. Tel. 4383

NO ONE IS COMPLETELY IMMUNE

BONAMINE* HCl

BRAND OF MECLIZINE HYDROCHLORIDE

Motion sickness affects people of all ages because almost everyone is sensitive to labyrinthine irritation induced by travel on land and sea and in the air.

Bonamine has proved unusually effective to prevent and treat this minor but distressing complaint. And a new agreeable method of administration is now offered by the incorporation of this well-tolerated agent, with its prolonged action, in a pleasantly mint-flavored chewing-gum base. 90% of the drug content becomes available in only five minutes of chewing.

Bonamine is also indicated for the control of nausea, vomiting and vertigo associated with labyrinthine and vestibular disturbances, Menière's syndrome and radiation therapy.

Supplied:

Bonamine Tablets *(scored and tasteless) 25 mg.*

New
Bonamine Chewing Tablets *25 mg.*



*TRADEMARK

Pfizer

PFIZER LABORATORIES, Brooklyn 6, N.Y.
Division, Chas. Pfizer & Co., Inc.

Upjohn
KALAMAZOO

Indicated wherever oral cortisone or hydrocortisone is effective. Available in 5 mg. tablets in bottles of 30 and 100. Usual dosage is ½ to 1 tablet three or four times daily

Deltasone*

requires only 1/5 the dose of cortisone

*Trademark for the Upjohn brand of prednisone (delta-1-cortisone)

THE NEW YORK POLYCLINIC
MEDICAL SCHOOL AND HOSPITAL
(Organized 1881)
(The Pioneer Post-Graduate Medical Institution in America)

SURGERY and ALLIED SUBJECTS

A two months full time combined surgical course comprising general surgery, traumatic surgery, abdominal surgery, gastroenterology, proctology, gynecological surgery, urological surgery. Attendance at lectures, witnessing operations, examination of patients preoperatively and postoperatively and follow-up in the wards postoperatively. Pathology, radiology, physical medicine, anesthesia. Cadaver demonstrations in surgical anatomy, thoracic surgery, proctology, orthopedics. Operative surgery and operative gynecology on the cadaver. Attendance at departmental and general conferences.

EYE, EAR, NOSE and THROAT

A nine months combined full time refresher course consisting of attendance at clinics, witnessing operations, lectures, demonstration of cases and cadaver demonstrations; operative eye, ear, nose and throat on the cadaver; clinical and cadaver demonstrations in bronchoscopy, laryngeal surgery and surgery for facial palsy; refraction; radiology; pathology, bacteriology and embryology; physiology; neuro-anatomy; anesthesia; physical medicine; allergy; examination of patients pre-operatively and follow-up post-operatively in the wards and clinics.

RADIOLOGY

A comprehensive review of the physics and higher mathematics involved, film interpretation, all standard general roentgen diagnostic procedures, methods of application and doses of radiation therapy, both x-ray and radium, standard and special fluoroscopic procedures. A review of dermatological lesions and tumors susceptible to roentgen therapy is given, together with methods and dosage calculation of treatments. Special attention is given to the newer diagnostic methods associated with the employment of contrast media, such as bronchography with Lipiodol, uterosalpingography, visualization of cardiac chambers, perirenal insufflation and myelography. Discussions covering roentgen departmental management are also included; attendance at departmental and general conferences.

SURGICAL PATHOLOGY

A systematic series of lectures is presented covering the lesions encountered in the practice of surgery. These are illustrated with fresh material from the operating room, gross specimens from the museum and kodachrome and micro-projected slides. The latest advances in blood grouping and transfusion reactions; didactic procedures, such as frozen sections, surgical biopsies, sponge biopsies, and aspiration of body fluid and secretions, are outlined.

For Information concerning these and other Courses please Address:

THE DEAN, 345 West 50th St.. New York 19. N. Y.

now available
for clinical use.

METICORT

"possesses an augmented therapeutic ratio"[1]
in cortical hormone therap

Schering

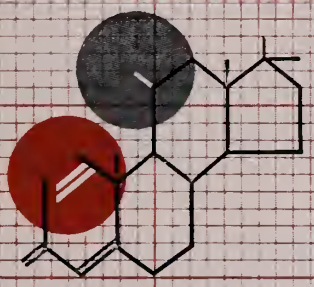
METICORTELONE possesses antirheumatic and anti-inflammatory effectiveness and hormonal properties similar to those of METICORTEN,[1-5] the first of the new Schering corticosteroids. Both are three to five times as potent, milligram for milligram, as oral cortisone or hydrocortisone. METICORTELONE and METICORTEN therapy is seldom associated with significant water or electrolyte disturbances.

METICORTELONE is an analogue of hydrocortisone, as METICORTEN is of cortisone. The availability of these new steroids, both discovered and introduced by Schering, provides the physician with two therapeutic agents of approximately equal effectiveness.

METICORTELONE is now available as 5 mg. buff-colored tablets, scored, bottles of 30 and 100. In the treatment of rheumatoid arthritis, dosage begins with an average of 20 to 30 mg. (4 to 6 tablets) a day. This is gradually reduced by 2.5 to 5 mg. until daily maintenance dosage, which may be between 5 to 20 mg., is reached. The total 24-hour dose should be divided into four parts and administered *after meals and at bedtime*. Patients may be transferred directly from hydrocortisone or cortisone to METICORTELONE without difficulty.

elone

ONISOLONE, SCHERING (METACORTANDRALONE)



Bibliography: (1) Bunim, J. J.; Pechet, M. M., and Bollet, A. J.: J.A.M.A. *157*:311, 1955. (2) Waine, H.: Bull. Rheumat. Dis. *5*:81, 1955. (3) Tolksdorf, S., and Perlman, P.: Fed. Proc. *14*:377, 1955. (4) Herzog, H. L., and others: Science *121*:176, 1955. (5) King, J. H., and Weimer, J. R.: Experimental and clinical studies on METICORTEN (prednisone) and METICORTELONE (prednisolone) in ophthalmology, A.M.A. Arch. Ophth., to be published. (6) Boland, E. W.: California Med. *82*:65, 1955; abs. Curr. M. Digest *22*:53, 1955. (7) Dordick, J. R., and Gluck, E. J.: J.A.M.A. *158*:166, 1955. (8) Margolis, H. M., and others: J.A.M.A. *158*:454, 1955. (9) Barach, A. L.; Bickerman, H. A., and Beck, G. J.: Dis. Chest *27*:515, 1955. (10) Arbesman, C. E., and Ehrenreich, R. J.: J. Allergy *26*:189, 1955. (11) Skaggs, J. T.; Bernstein, J., and Cooke, R. A.: J. Allergy *26*:201, 1955. (12) Schwartz, E.: J. Allergy, *26*:206, 1955. (13) Robinson, H. M., Jr.: J.A.M.A. *158*:473, 1955. (14) Dordick, J. R., and Gluck, E.: Preliminary Clinical trials with prednisone (METICORTEN) in systemic lupus erythematosus, A.M.A. Arch. Dermat. & Syph., in press. (15) Nelson, C. T.: J. Invest. Dermat. *24*:377, 1955.

first of the new Schering corticosteroids

METICORTEN

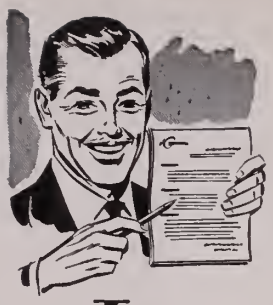
PREDNISONE, SCHERING (METACORTANDRACIN)

- replacing the older corticosteroids in
  rheumatoid arthritis[1,2,6-8]
  intractable asthma[9-12]
  eye disorders[5]
  certain skin disorders such as disseminated lupus erythematosus,[13,14] acute pemphigus,[13,15] atopic dermatitis[15] and other allergic dermatoses
- more active than hydrocortisone or cortisone, milligram for milligram
- relatively free of significant water or electrolyte disturbances [5]

METICORTEN is available as 5 mg. scored, white tablets in bottles of 30 and 100.
METICORTELONE,* brand of prednisolone (metacortandralone).
METICORTEN,* brand of prednisone (metacortandracin).

ML-J-59

*T.M.



READING TIME—1 MINUTE

A FEW FACTS FOR THE BUSY DOCTOR WHO WANTS THE

Latest Information About Filter Tip Cigarettes

Your patients are interested in cigarettes! From the large volume of writing on this subject, Brown & Williamson Tobacco Corp. would like to give you a few facts about *Viceroy*.

Only Viceroy gives you, your patients, and all cigarette smokers 20,000 Filter Traps in every filter tip. These filter traps, doctor, are composed of a pure white non-mineral cellulose acetate. They provide the maximum filtering efficiency possible without affecting the flow of smoke or the full flavor of Viceroy's quality tobaccos.

Smokers report Viceroys taste even better than cigarettes without filters.



King-Size Filter Tip

VICEROY

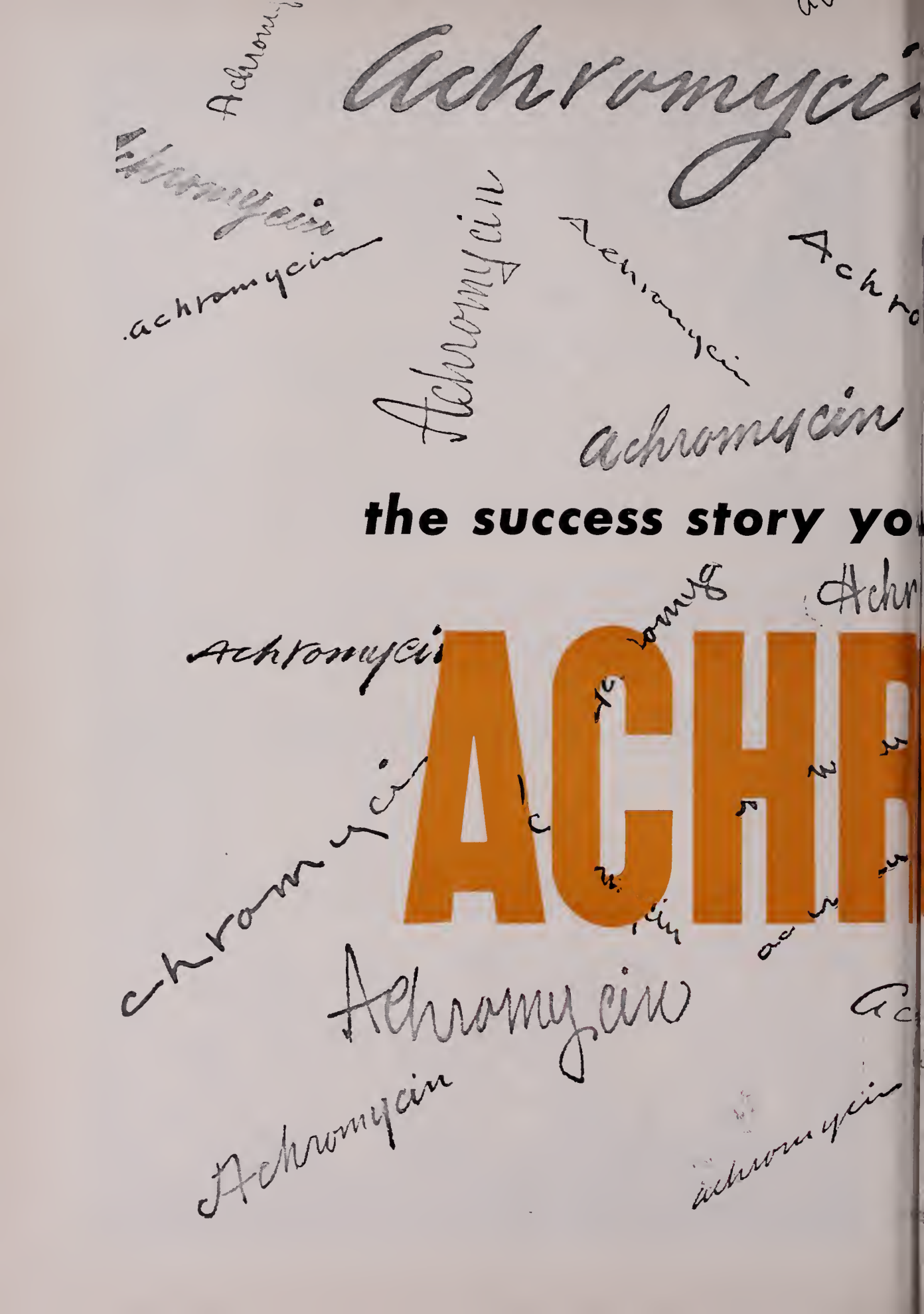
World's Most Popular Filter Tip Cigarette

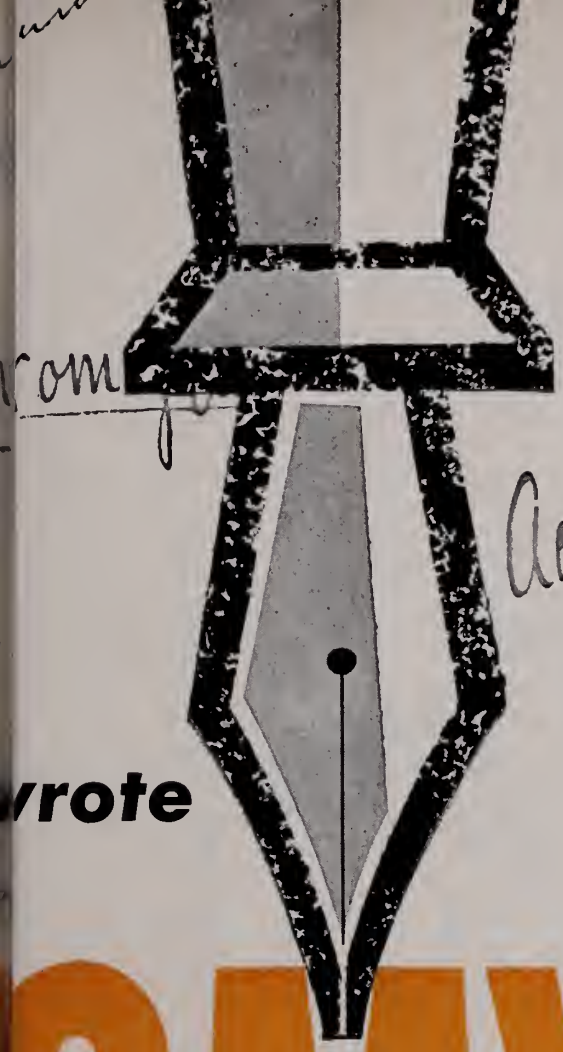
Only a Penny or Two More Than Cigarettes Without Filters






To Relieve
Nasal Congestion
in HAY FEVER
Neo-Synephrine promptly constricts engorged capillaries thus reducing swelling and "bogginess" of the allergic nasal mucosa.
Neo-Synephrine's dependable vasoconstrictive effect also helps to stop local irritation and sneezing. No central stimulating effect, no drowsiness.
Used with undiminished effectiveness throughout an attack of allergic rhinitis, Neo-Synephrine may prevent complications — sinusitis, nasal polyps or even asthma, which may result from inadequate sinus drainage and chronically blocked nasal passages.
NEO-SYNEPHRINE®
hydrochloride
DOSAGE FORMS
Solutions: 0.25% — 0.25% (aromatic) — 0.5% — 1% —
Emulsion 0.25% — Jelly 0.5%
Nasal Spray 0.5% (plastic, unbreakable squeeze bottle)
Nasal Spray Pediatric 0.25% (new introduction)
Contains Zephiran® Cl 0.02% (1:5000), antibacterial wetting agent and preservative for greater efficiency.
Winthrop-Stearns INC.
NEW YORK 18, N. Y. WINDSOR, ONT.
Neo-Synephrine (brand of phenylephrine) and Zephiran (brand of benzalkonium chloride — refined), trademarks reg. U. S. Pat. Off.


Achromycin
achromycin
Achromycin
achromycin
Achromycin
achromycin
the success story yo
ACHR
Achromycin
Achromycin
Achromycin
achromycin



vrote

Achromycin

Achromycin

Achromycin

Achromycin

Achromycin

Achromycin

Achromycin

Achromycin

OMYCIN*

HYDROCHLORIDE

Tetracycline HCl *Lederle*

When you have prescribed ACHROMYCIN you have confirmed its advantages—again and again. It is well tolerated by patients of every age. Compared with certain other antibiotics, it has a broader spectrum, diffuses more rapidly, is more soluble, and is more stable in solution. It provides prompt control of many infections including those caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa. Furthermore, it is a *quality* product; every gram is made under rigid control in Lederle's *own* laboratory.

ACHROMYCIN, a major therapeutic agent now...growing in stature each day!

dry-filled capsules

DERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* PEARL RIVER, NEW YORK

*REG. U. S. PAT. OFF.

Lederle

When she's frightened and tense (*and getting more upset by the minute*) . . .

When she balks at scary, disquieting examinations (*before you've even begun*) . . .

When prompt sedation is indicated (*and a pleasant taste will help*) . . .

short-acting

Nembutal®

(PENTOBARBITAL, ABBOTT)

elixir

will quiet her fears . . . relieve her tensions . . . and reduce the effect of her psychic trauma.

Onset of action is prompt, and duration may be short or moderate, depending on the dose. Also, since the drug is quickly and completely destroyed in the body, your patient has less tendency toward that next-day "hangover."

Administer pleasant-tasting NEMBUTAL Elixir straight from the spoon, or mix it with water, fruit juice, milk or infants' formula. The dosage required is small—only about one-half that of many other sedatives. Abbott

508160



Each teaspoonful of NEMBUTAL *Elixir represents 15 mg. (¼ gr.)* NEMBUTAL *Sodium.*

The Full-Liquid Diet pulls its own weight!

Packing good nutrition into the full-liquid diet for your patient who must stay on it a long time is sometimes difficult. But with a blender or egg beater, almost any food can be used.

Mix the same foods many ways—

Strained chicken in milk makes "bisque"—in tomato juice it's "creole." Strained liver and bacon double-times the same way.

Your patient may like cottage cheese whipped into milk flavored with chocolate and mint, or he can blend it with cranberry juice sparked with lime.

Strained carrots go in milk, broth, or pineapple juice. Flavor the milk blend with nutmeg, the broth with parsley, and the juice with cinnamon and brown sugar. An egg or skim milk powder may be added for a protein bonus.

Strained fruits in fruit juices do well with a squeeze of lemon or a touch of mint.

Then serve them up with dash—

Bright colored drinks look good in clear glass—pale ones in gayly painted glasses. And if a mixture looks drab, hide it in a bean pot or a round jam jar wrapped in a napkin.

Add a bright plastic straw. And for garnish, try a sprinkle of spice, a spoonful of sherbet, a dab of whipped cream, or a lemon slice hooked on the edge of the glass. Or frost the rim by dipping the glass in water, then in sugar.

Of course, only you can tell your patient *just which foods* he can and must have for his specific condition. But these suggestions can help guide him within the limits you set.



United States Brewers Foundation

Beer—America's Beverage of Moderation

pH 4.3; 104 calories/8 oz. glass (AVERAGE OF AMERICAN BEERS)

If you'd like reprints of 12 different diets, please write United States Brewers Foundation, 535 Fifth Avenue, New York 17, N.Y.

One of a Series of Newspaper Ads Directed to Your Patients and Our Customers....

PEOPLES DRUG STORES INC

THANKS TO YOUR DOCTOR

safe ending to a sound night's sleep



Some folks get to sleep easily enough, but are soon up, awake for the night. Still others have difficulty falling asleep in the first place.

Modern medicine has placed safe, sleep-inducing drugs *in your doctor's hands* for both kinds of insomnias.

Rely on your doctor to prescribe safe aids for sound sleep if you need such. Never use drugs prescribed for someone else. Rely on Peoples for quick, accurate prescription service. And, of course, your prescription is priced with uniform economy at Peoples Service Drug Store.



PEOPLES *Certified* **PRESCRIPTIONS**

AT ALL PEOPLES SERVICE DRUG STORES

...just what the doctor ordered

© 1955 PEOPLES DRUG STORES, INC.

Upjohn
KALAMAZOO

Indicated wherever oral cortisone or hydrocortisone is effective • Available in 5 mg. tablets in bottles of 30 and 100 • Usual dosage is ½ to 1 tablet three or four times daily

Delta-Cortef*

Less sodium retention, less potassium depletion

*Trademark for the Upjohn brand of prednisolone (delta-l-hydrocortisone)

Relax the best way
... pause for Coke



Time out for refreshment

DRINK
Coca-Cola
REG. U.S. PAT. OFF.



when hormones

are preferred therapy...

SCHERING HORMONES

assure superior quality

Schering's high standards and quality control assure products of unchanging potency and purity for uniform action and clinical efficacy.

minimal cost

Manufacturing know-how and continuing research by Schering provide preparations of highest quality at minimum cost.



specific

androgen therapy

anabolic

in tissue wasting

Oral: 10 and 25 mg. Buccal: 10 mg.



'Seconal Sodium'

(SECOBARBITAL SODIUM, LILLY)

a barbiturate of rapid action . . . short duration

When simple insomnia is the presenting complaint, a bedtime dose of 'Seconal Sodium' is often indicated. Its hypnotic effect is prompt—within fifteen to thirty minutes; relaxation and sleep follow quickly. Your patient awakens refreshed and well rested.

Available in 1/2, 3/4, and 1 1/2-grain pulvules.

Lilly

QUALITY / RESEARCH / INTEGRITY

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U.S.A.

The Virginia
MEDICAL
MONTHLY

August, 1955
Vol. 82, No. 8
Whole No. 1238

Jaundice Associated With Chlorpromazine

JAMES O. BURKE, M.D.
NATHAN BLOOM, M.D.
HARLEY DAVIDSON, A.B.
Richmond, Virginia

CHLORPROMAZINE, Compound 2601-A (SKF) or "Thorazine" (10- dimethylaminopropyl) -2 chlorophenothiazine hydrocloride)[1] has been widely used in treating various neuropsychiatric disorders, nausea and vomiting caused by drugs, gastrointestinal disturbances, cardiovascular disease, pregnancy and a variety of other causes.[2,3,4,5,6,7,8] It is secondarily mildly antispasmotic, antihistaminic and adrenolytic. It potentiates hypnotics, sedatives, narcotics and anesthetics. Some of its side effects are drowsiness, nasal congestion, constipation, maculopapillary rash, syncope and shock.[8,9] It has also been reported as a cause of jaundice.[2,3,4,5,6,7]

The following is the report of a case of jaundice thought to be due to chlorpromazine. A white female, age 60 years, was admitted to the Medical College of Virginia Hospital on September 4, 1954, complaining of heaviness in her chest and pain in her arms of approximately five hours' duration. The patient had a similar complaint 11 months previously, at which time she was admitted to this hospital and diagnosed as arteriosclerotic and hypertensive cardiovascular disease with acute coronary insufficiency. Since the previous admission, the patient had experienced anginal pain which was relieved by nitro-glycerin. Three weeks previous to this admission, the patient saw her physician because of chest pain of approximately one week's duration. Examination at that time revealed a blood pressure of 170 mm. of Hg. systolic, 110 diastolic, normal electrocardiogram, normal urinalysis and hematologic examination. The patient was placed on Serpasil 0.4 daily. Approximately one week previous to this admission, the patient had severe substernal aching pain which was not relieved by nitro-glycerin but was relieved by 100 mgm. Demerol. The pain returned shortly, but was less severe. Five hours previous to admission, following the evening meal, the patient again experienced severe substernal pain which was not relieved by nitro-glycerin. The patient was hospitalized.

On admission, the patient was apprehensive, complaining of heaviness in her chest and arms. On examination, the pulse was 60 and slightly irregular, blood pressure 190 mm. of Hg. systolic, 110 diastolic, temperature 98.2. Examination was negative except for infrequent premature venticular contractions and an apical systolic murmur, which was short and blowing in character. The patient was started on oxygen, morphine and phenobarbital. Electrocardiogram showed marked inversion of T waves from leads V_2 through V_5 compatible with recent anterior myocardial infarction. Later electrocardiographic studies showed evolution of a massive anterior myocardial infarction.

The patient did well except for nausea and vomiting, thought to be caused by morphine. On the 12th hospital day, oral chlorpromazine 25 mgm. three times daily was begun because of nausea and vomiting. Three days later the dosage was reduced to 30 mgm. daily, and on the 28th hospital day it was discontinued. Six days later, chlorpromazine 75 mgm. was given for one day because of a return of nausea. Three days following this, the urine was noticed to be deep orange in color, and the stools were clay-colored. On the 39th hospital day (27 days after starting chlorpromazine) she was clinically jaundiced. The patient did not complain of

From the Department of Medicine, Medical College of Virginia.
Received for publication March 30, 1955.

any pain except that in her chest. Liver function tests at this time were as follows: serum bilirubin direct 4.4 mgm.%, total 6.8 mgm.% thymol turbidity 2 units; cephalin flocculation negative; cholesterol total 310 mgm.%, free 42%, esters 58%. The patient had no other complaint except indigestion. During the next two weeks the serum bilirubin rose to 14.2 mgm.% total and 9.8 mgm.% direct. Serum alkaline phosphatase rose to 15.6 B. L. units (normal 0.8 to 2.9 units). A serum amylase was 122 Somogyi units. On the assumption that the jaundice was a sensitivity-type of reaction, ACTH was given.

On the 46th day of hospitalization, normal color began to return to the stools and the urine became lighter in color. Liver function studies gradually returned toward normal. The patient improved clinically, and she was discharged on October 29, her fifty-fifth hospital day, at which time serum bilirubin was 5.2 mgm.% total, 3.0 mgm.% direct, serum alkaline phosphatase 12.4 B. L. units.

Follow-up studies indicated that she convalesced normally following her myocardial infarction, and that her liver function tests 17 days later were: serum bilirubin direct 2 mgm.%, total 2.5 mgm.%; cephalin flocculation negative; thymol turbidity 2 units, alkaline phosphatase 8.7, blood sugar 100 mgm.%. On January 4, 1955 (93 days after onset of jaundice) the serum bilirubin was direct 0.2 mgm.%, total 0.4 mgm.%; cephalin flocculation negative; serum alkaline phosphatase 3.2.

Discussion

We have no tissue proof of the cause of jaundice in this case, but in view of the laboratory data suggesting cholangiolitic hepatitis and the similarity to other reported cases, we believe chlorpramazine was the chief etiologic factor.

Lehmann and Hanrahan[2] treated 71 patients, aged 18 to 82 years, with chlorpromazine for psychomotor excitement and manic states. Three patients treated for 2, 3, and 4 weeks respectively developed jaundice which was thought to be of toxic origin with blood and urine abnormalities. Their patients were symptom free within ten days after discontinuance of the drug. Their cephalin cholesterol flucculation tests were negative in two to three weeks. In their clinical material about half of the patients showed slight changes in the cephalin cholesterol flocculation, and the authors state a number of these were of questionable significance.

Winkelman,[3] in a series of 142 patients being treated for various neuropsychiatric disorders, found three patients who developed jaundice after two to five weeks of chlorpromazine therapy. The jaundice subsided with withdrawal of the drug. The author states that liver biopsy of one patient revealed the presence of chronic liver disease, suggesting that patients with liver damage may be more susceptible to the production of jaundice.

Moyer *et al.*,[4,5] in a clinical study of the antiemetic effects of chlorpromazine in 306 patients noted one patient who, while being treated for psychogenic disease became jaundiced. The patient had been receiving 200 mgm. of Thorazine daily for two weeks when he became jaundiced. Laboratory studies inicated the patient had a cholangiolitic-type of jaundice. There was no evidence of hepatocellular damage.

Van Ommen and Brown[6] recently reported three cases of jaundice associated with chlorpromazine therapy. Two cases received the drug for 19 and 21 days respectively. Two patients had exploratory laparotomies to determine whether or not the jaundice was of a surgical nature. Liver biopsies were done on these two cases. One demonstrated bile stasis and bile phagocytosis by Kupfer cells. The other was explored after four months of jaundice. Biopsy revealed severe bile stasis, dissociation of liver cords, and slight central lobular fibrosis. One patient, who was not explored, had an eosinophilia of 32% at one time. The laboratory findings in their cases were: increased serum bilirubin, bile in the urine, increased alkaline phosphatase, increased cholesterol, and decreased urinary urobilinogen. All tests for hepatocellular damage were unaltered. They have observed that either the Hammarsten or Huppert-Nakayama tests for bile in the urine must be used, as other tests may react with chlorpromazine present in the urine to give false positives. The authors comment on the implied significance of the eosinophilia and the similarity to the arsphenamine jaundice cases reported by Hanger and Gutman.[10]

Zatuchni and Miller[7] report a case of jaundice associated with chlorpromazine after 13 days of therapy. This patient also had increased serum bilirubin, almost entirely of the immediate direct type, increased alkaline phosphatase and total cholesterol. There was also bile in the urine. Seventeen days following the appearance of jaundice, an exploratory laparotomy was done at which time liver biopsy was obtained. Microscopic studies were interpreted as consistent with acute cholangiohepatitis. Cholangiogram done through a T tube revealed no extrahepatic obstruction. The jaundice disappeared on the 40th day.

Comment

The mechanism of jaundice associated with chlorpromazine is not established. The biopsy findings appear identical to those described by Hanger and Gutman[10] in jaundice due to arsphenamine therapy. Their cases of jaundice have been thought to be a sensitivity reaction to the drug and usually occurred early in the course of arsphenamine treatment. Jaundice occurring late in arsphenamine therapy is thought to be homologous serum jaundice. The pathology of the liver biopsies in the chlorpromazine cases and in the arsphenamine cases of Hanger and Gutman is recognized as cholangiolitic hepatitis. The classic deviations in the laboratory tests in cholangiolitic hepatitis are: elevations of serum bilirubin (chiefly direct), serum alkaline phosphatase and total cholesterol. The other liver function tests are usually normal, but may reveal some evidence of hepatocellular injury. These laboratory test changes are, of course, similar to those of "obstructive jaundice" and "regurgitation jaundice" due to extrahepatic causes and have led to the term "intra-hepatic obstructive jaundice". Surgical exploration has been performed in a number of cases where the jaundice was thought to be due to chlorpromazine because of these laboratory tests[6,7] and the absence of bile in stools.

The incidence of jaundice thought to be induced by chlorpromazine is low and most cases have apparently reverted to normal in a few weeks. Our case remained jaundiced for about 93 days, one of the cases reported by Van Ommen and Brown was still jaundiced more than five months, and one case of Azima and Ogle[11] remained jaundiced after seven months, which suggests that the morbidity of this condition is of more than cursory significance.

Summary and Conclusions

Chlorpromazine is associated with jaundice in a small percentage of cases and thought to be the cause of that jaundice. The type of jaundice reported appears to be cholangiolitic and, hence, clinically similar to jaundice due to extra-hepatic causes. Surgical exploration has been done for diagnosis in some cases. The morbidity of the reported cases of jaundice may require restriction in the use of chlorpromazine.

Bibliography

1. Information by Smith, Kline, and French.
2. Lehmann, H. E., and Hanrahan, G. E.: Chlorpromazine A New Inhibiting Agent for Psychomotor Excitement and Manic States, A. M. A. Archives of Neurology and Psychiatry, 71, No. 2, 227, Feb. 1954.
3. Winkelman, N. W., Jr.: Chlorpromazine in the Treatment of Neuropsychiatric Disorders. J.A.M.A., 155: 18, May, 1954.
4. Moyer, J. H., Kent, B., Knight, R. W., Morris, G., Dizon, M., Rogers, S., and Spurr, C.: Clinical Studies of An Anti-Emetic Agent—Chlorpromazine. Am. J. Med. Science, 228: 174,, 1954.
5. Moyer, J. H., Kent, B., Knight, R., Morris, G., Huggins, R., and Handley, C.: Am. J. Med. Science, 227, 283; 1954.
6. Van Ommen, R. A., and Brown, C. H.: Obstruction Type Jaundice Due to Chlorpromazine (Thorazine). J.A.M.A., 157: 4, January, 1955.
7. Zatuchni, J., and Miller, G.: Jaundice During Chlorpromazine Therapy. N. Eng. Jour. Med., 251: 25 December, 1954.
8. Rea, E. L., Shea, J., and Fazekas, J. F.: Hypotensive Action of Chlorpromazine, J.A.M.A., 156: 1249, Nov., 1954.
9. Burke, J. O.: Unreported data.
10. Hanger, F. M., and Gutman, A. B.: Post-Arsphenamine Jaundice Apparently Due to Obstruction of Intra-hepatic Biliary Tract. J.A.M.A., 115: 263, 1940.
11. Cited by Van Ommen and Brown. (6)

1200 East Broad Street.

Enigma of Tuberculosis.

The plain truth is that the enigma of tuberculosis is far from being solved, in spite of the decreasing death rates and the gradual decline in case rates. Manifestations of of the disease and the organism associated with it have been studied by a host of distinguished scientists. A tremendous background of information has been collected, but many of the most basic and crucial facts seem to be just beyond our reach. Our present position could be described as optimistic and at the same time frustrating. Opportunities for advances in the control of tuberculosis are more numerous than ever before, but it is obvious that we are not accepting fully the responsibilities thrust upon us by the rapid scientific progress of recent years. Floyd M. Feldman, M.D., Medical Director, NTA, Bull. Nat. Tuberc. A, April, 1955.

Arteriomesenteric Duodenal Obstruction

CHARLES F. SCHNEIDER, M.D.
ANDREW F. GIESEN, M.D.
Radford, Virginia

HIGH intestinal obstructive symptoms resulting from compression of the third part of the duodenum by the superior mesenteric vessels is encountered infrequently but must be considered in every case of high intestinal obstruction from infancy to old age. This disease entity was described before the turn of the century but the possibility of true mechanical obstruction being produced by the superior mesenteric vascular pedicle remained a controversial issue for many years. During the past twenty years, however, a number of cases have been reported with the diagnosis fully substantiated by roentgenographic and surgical findings. There can be no further doubt that this entity does exist and is probably much more common than previously suspected.

Because of the human being's erect carriage, the major portion of the mid-gut hangs in a dependent position from its mesenteric attachments. In most postmortum examinations, careful dissection and inspection will reveal a normal indentation along the anterior aspect of the third portion of the duodenum due to the superior mesenteric vascular pedicle. In its retroperitoneal position, this portion of the duodenum is fairly well fixed as it crosses the vertebral column. Therefore, it is not difficult to visualize various degrees of duodenal obstruction secondary to factors exaggerating this compression of the duodenum between the vascular pedicle and mesentery anteriorly, and the unyielding spinal column posteriorly. These predisposing factors are of congenital or acquired origins. The predisposing congenital factors include: a short mesentery and superior mesenteric vascular pedicle, an asthenic habitus with visceroptosis, a long mobile transverse colon, incomplete rotation and fixation of the large bowel resulting in an abnormally mobile cecum and ascending colon, lordosis or lumbar kyphosis, abnormally low origin of the superior mesenteric artery from the aorta, and, finally, an abnormal fixation at Treitz ligament. The important acquired factors are: lack of fat in the mesentery, poor abdominal muscle tone, immobilization in the supine position—especially in hyper-extension as in the body plasters used for compression fractures of the spine (cast syndrome)—emaciation, mesenteric adhesions increasing the traction upon the arteriomesenteric stalk, and, finally, fibrosis, inflammation or malignant invasion of the mesenteric root.

The production of clinical obstruction then is probably a combination of both the congenital and acquired factors. Certainly, of the many visceroptotic individuals, only an occasional one demonstrates arteriomesenteric compression. On the other hand, the clinical picture may become apparent for the first time in an elderly individual who has experienced recent and excessive weight loss. The majority of cases nevertheless will give a history of intermittent episodes of obstructive symptoms which frequently dates from infancy or early childhood.

The actual incidence is difficult to ascertain and depends to a great extent upon the index of suspicion of the clinician and roentgenologist. It is most commonly seen in females in a ratio of 4 to 1. The syndrome has been recognized in practically every age group, but it is most frequently recognized in infancy and childhood, early adult life and old age. The disease relates directly to the role played by the predisposing congenital factors as compared to the acquired factors. The congenital abnormalities function constantly while the acquired factors may vary greatly according to age, occupation, type of diet, or nutrition. Most typically, one sees a young, asthenic, undernourished woman complaining of abdominal distention and pain, which occurs between thirty minutes and an hour after meals. She is very particular about her diet and blames many foods for her discomforts. She relates a history of gaseous eructations, chronic anorexia, and anemia, together with periods of weight loss followed by aggravation of her abdominal distention, pain and occasional copious vomiting. Neuralgic symptoms and headaches are often complained of, and, without complete physical and roentgenographic examinations, the unfortunate woman is disposed of as a psychoneurotic. The true diagnosis may be suspected if the symptoms are relieved by placing the patient in a prone position or elevating the foot of the bed after meals. The knee chest position may rapidly relieve the distention and post-prandial bloating. In these cases of chronic duodenal obstruction, the diagnosis may not be sus-

Received for publication March 21, 1955.

pected for many years until one of the variable acquired factors is brought into play and acute complete duodenal obstruction supervenes. The precipitating event may be an acute illness, an operation, or fracture requiring the patient to be in the supine position. A simple mild infection or illness causing anorexia and weight loss may deplete the mesenteric and retroperitoneal fat depots sufficiently to allow increased pressure on the duodenum by the superior mesenteric vascular pedicle and result in clinical obstruction. Frequently this acute obstruction is diagnosed as acute gastric dilitation. Acute dilatation undoubtedly occurs but is probably secondary to the duodenal obstruction. X-rays will frequently show that the duodenum, as well as the stomach, is involved.

In case of acute duodenal obstruction, nausea and vomiting is severe. The vomiting is copious and frequently projectile. Abdominal distention is extreme and dehydration with electrolyte imbalance rapidly develops. Pain is, however, variable, and usually absent. The abdominal pain in acute duodenal obstruction is related to the distention alone. Peristaltic action will be minimal or absent due to the paralysis of the over-distended duodenal and gastric musculature.

The physical findings in chronic duodenal obstruction are non-specific unless there is gastric distention at the time of examination, in which case upper abdominal fullness and succussion splash may be demonstrable. With acute duodenal obstruction, the abdominal distention may be extreme. Extra cellular fluid deficit characterized by sunken eyeballs, dry fissured tongue, and sticky skin will be obvious. Alkalosis and tetany may be present.

Diagnosis depends to a great extent upon x-ray findings following a barium meal. It has been said that chronic duodenal obstruction produces a back and forth, churning motion in the transverse portion of the duodenum upon fluoroscopic examination. This finding, however, is not constant. Characteristically, the stomach and duodenum are dilated and a barium meal will show delay or obstruction at the terminal duodenum.

Arteriomesenteric duodenal obstruction must be differentiated from congenital atresia and stenosis of the small bowel, tumors or cysts, hypertrophic pyloric stenosis, and annular pancreas. Internal hernias and volvulus resulting from deficient intestinal rotation and fixation, together with periduodenal adhesions should be considered.

Treatment in all cases of arteriomesenteric duodenal obstruction should be primarily conservative. In those with acute obstruction, bed rest is indicated, the patient preferably being kept on his side or in the prone position. Gastric tube decompression should be carried out. Initially large volumes will be aspirated, often amounting to several liters. Lavage may be necessary until the stomach is clean and empty. Constant suction should be applied to the tube for a period of 48 hours and then the tube may be clamped for intervals and liquids given by mouth. With the patient in the prone position after feedings, it can be determined by interval periods of suction whether the gastro-duodenal contents are again passing the barrier. In the severely dehydrated patient, proper intravenous fluid therapy is important. During the first 24 hours, six to seven liters of the correct electrolyte and glucose solutions will usually be necessary. When the stomach and duodenum has regained muscular tone, the suction tube is removed and diet rapidly graduated. The ensuing plan of therapy is then essentially the same as the cases of chronic obstruction. Here weight gain is the main objective and, therefore, a low residue, high caloric, bland diet is indicated. The assumption of the prone or knee chest position after meals is important. Correction of visceroptosis and muscle relaxation with proper physiotherapy, postural exercises, and abdominal supports is often of great value.

Surgical intervention will be required in severe or recurrent cases. The procedure of choice is duodenojejunostomy between the most dependent portion of the duodenum and the first loop of the jejunum. In cases where surgery is indicated, it is an extremely simple procedure because of the hypertrophied, bulging duodenum presenting below the right transverse mesocolon.

Case Report

P.F.S., an 18 year old white girl was admitted to the Radford Community Hospital on 9-25-54 complaining of severe nausea, vomiting, abdominal distention and weakness.

She had been in apparent good health except for inability to gain weight, until eleven days previous to admission, when, after eating an evening meal, she first experienced abdominal distention, nausea, and vomiting. The vomiting was excessive and lasted throughout the night. On the following day she felt better and attempted to eat, but, again, severe abdominal distention was followed by vomiting. Except for the distention, nausea and vomiting, there were no other symptoms. She had no history of abdominal pain. On the third day of her symptoms she was taken to a local hospital where a barium

gastro-intestinal x-ray study was done. This demonstrated a distended stomach and duodenum. (Fig. 1) Constant gastric suction and intravenous fluid therapy was instituted for approximately six days and another barium study was done. She was then discharged and advised to take a liquid diet for several days before graduating to a more complete diet. Within 24 hours after returning home, abdominal



distention, nausea and vomiting again became severe. She was then brought to this hospital and admitted.

Past History and Systems Review were non-contributory.

Physical examination at admission revealed an extremely thin, tall young woman who appeared acutely ill. Temperature was 99.8 by rectum; pulse 90; respiration 20. Severe extra-cellular fluid deficit was evidenced by a dry furrowed tongue, soft eyeballs and a putty like skin. Muscle weakness was pronounced. The abdomen was soft, protuberent, but not tender. Palpation elicited a succussion splash over the entire abdomen and peristalsis was not present upon auscultation. The remainder of the physical examination was not remarkable.

Initial laboratory findings revealed a hemoglobin of 17.4 gms. and 6,750,000 red cells; the white count was 5,900 with an essentially normal differential count. The urinalysis was within normal limits except for a high specific gravity.

X-ray Findings: Upright films of the abdomen and pelvis showed extreme gastric and duodenal dilatation with a fluid level present in the left upper quadrant. The most redundant portion of the stomach lay deep in the pelvis where there was a small amount of barium mixture still present. There was also a small amount of barium located in the colon.

Course in the Hospital: Initially, during the first 12 hours, 4000 cc. of the proper intravenous fluids were administered, and gastric suction, employing a large caliber Levin tube, was instituted. A total of 4500 cc. of fluid and barium were removed from the stomach within the first few hours. By 9-27-54, normal electrolyte balance and hydration was achieved and the urinary output was adequate. Subsequently the patient was kept in the prone and the knee-chest position as much as possible. The indwelling gastric tube was removed and a liquid diet begun. Further x-ray examination (see illustration) revealed persistent dilatation of the stomach and duodenum. Therefore, surgery was decided upon. The abdomen was opened through a right upper paramedian incision. It was noted that the jejunum and ileum were ribbon-like but the stomach and duodenum were hypertrophied and dilated. The second portion of the duodenum was extremely redundant and protruded well below the transverse mesocolon to the right of the midline. Exploration revealed the last portion of the duodenum to be extremely high and to be compressed against the vertebral bodies by the superior mesenteric vessels. No other abnormality was found. A simple duodeno-jejunostomy was carried out, employing the most redundant portion of the duodenum and the first loop of jejunum.

The patient's post-operative course was entirely uneventful. She was ambulatory on the first post-operative day. On the seventh day she was discharged, taking a full diet, completely healed and having no symptoms whatsoever referable to the gastro-intestinal tract. Follow-up of this patient three months after discharge revealed that she had gained 13 lbs. over her usual weight and continued to have no gastro-intestinal symptoms.

Summary and Conclusions

1. Arteriomesenteric duodenal obstruction should be considered regardless of age when high intestinal obstruction is encountered.
2. The development of this entity depends upon certain predisposing congenital and acquired factors which induce or exaggerate compression of the duodenum between the superior mesenteric vascular pedicle and the spinal column.

3. Depending upon the type and degree of duodenal compression, the clinical course may be one of acute, intermittent or chronic obstruction.
4. Diagnosis and treatment are outlined, and one case of acute arteriomesenteric duodenal obstruction surgically treated is presented.

Bibliography

1. Beck, Col. William C.: Acute Gastroduodenal Obstruction (Dilatation), Arch. Surg., 52: 538 May, 1946.
2. Graver, F. W.: Duodenal Ileus (Wilkie's Syndrome) Arterio-Mesenteric Ileus. Bull. Vancouver Med. Assn., 24: 116 Jan, 1948.
3. Hertz, John: Duodenal Obstruction, J. Internal. Coll. Surg., 13: 644 May, 1950.
4. Kauffman, Raymond R., and Frank Gerbode: Arteriomesenteric Duodenal Ileus. Stanford Med. Bull., 9: 262 Nov., 1951.
5. Kettenback, Edward L., and Palumbo, Luis T.: Arterio-Mesenteric Duodenal Compression: Surgical Treatment. Arch. Surg., 62: 145 Jan., 1951.
6. McCoy, Walter Clayton: Chronic Duodenal Ileus. New Orleans Med. & Surg. Jr., 92: 564, April, 1940.
7. McGehee, John Lucius, and Anderson, William D.: Chronic Obstruction and Dilatation of the Duodenum. Am. Surg., 105: 741, May, 1937.
8. McGehee, John Lucius: Chronic Obstruction and Dilatation of the Duodenum. Am. J. of Surg., 40: 140 April, 1938.
9. Miller, Reginald, and Gage, H. Courtney: Gastromegaly from Arteriomesenteric Compression of the Duodenum in the Newborn. Arch. Dis. Childhood, 10: 179, June, 1935.
10. Romagosa, Jerome, and Manville, Leon: Chronic Intermittent Arteriomesenteric Occlusion of the Duodenum. Radiology, 57: 1, 63, July, 1951.
11. Roodenburg, Andries I., and Bodon, George R.: Obstruction of the Third Part of the Duodenum Caused by Compression of the Superior Mesenteric Blood Vessels. N. Y. State Jour. Med., 53: 2692, Nov. 15, 1953.
12. Shrum, Richard C.: Duodenal Obstruction Due to Pressure of Superior Mesenteric Vessels, J.A.M.A., 148: 550, 1952.
13. Shumway, Margaret; Uhler, Walter M., and Davis, Park Lee: Compression of the Duodenum by the Superior Mesenteric Artery. Penn. M. J., 56: 816, Sept., 1953.
14. Telford, Douglas: Chronic Arteriomesenteric Duodenal Ileus. J. Internat. Coll. Surg., 15: 129, Feb., 1951.
15. Wells, Arthur H.: C.P.C. Minn. Gen. Hosp., Minnesota Med., 27: 822, Oct. 1944.
16. Wilkie, D. P. D.: Chronic Duodenal Ileus. Am. J. M. Sc., 173: 643, 1927.

707 Randolph Street.

Need Visual Aid.

A large number of cerebral palsied children also suffer eye defects which often can be corrected and should be given attention. Dr. Arnold S. Breakey, Lenox Hill Hospital, said an estimated six per 1,000 live born babies suffer cerebral palsy, which ranks second only to polio as a crippler of children. More than half of these children may have eye defects.

He said in the June Archives of Ophthalmology, published by the American Medical Association, that all infants found to have eye defects should be examined for evidence of cerebral palsy, a disability resulting from injury to the motor centers of the brain. Children who have eye defects accompanying cerebral palsy should be treated, since many of the defects can be corrected and total rehabilitation of the patient may be helped by visual improvement.

Poor vision in these children may have been overlooked because of more obvious defects, such as difficulty in walking. A study of 100 cerebral palsy patients at Lenox Hill Hospital showed that 56 per cent had visual defects, which was "representative" of cerebral palsied children as a whole.

The most usual disorder was in muscle balance. About 40 per cent of the group studied suffered turning in or out of the eyes. Lenses, surgery, exercise, and other forms of treatment were used and many of the children showed improvement.

"Cerebral palsy victims in our population represent a very significant group." ". . . every victim of this disease deserves an early eye examination. Careful diagnosis and adherence to accepted methods of therapy yield gratifying results."

The Diagnosis, Etiology, and Treatment of Hiatal Esophageal Hernia

PORTER P. VINSON, M.D.
Richmond, Virginia

MANY conflicting opinions concerning the diagnosis, cause and treatment of hiatal esophageal hernia have served to confuse those who are responsible for the management of patients having this interesting condition.

Some of this confusion arises from the fact that frequently routine roentgenoscopic examination of the upper gastrointestinal tract reveals hiatal hernia in patients who do not have discomforts that can be attributed to hernia, while in others having significant symptoms hernia is not detected, although pouching of an area of the lower esophagus, designated by the term phrenic ampulla, may be interpreted as herniation of a portion of the stomach above the diaphragm.

In other cases vague symptoms located in the upper abdomen may be associated with the presence of hernia, but there may be considerable doubt as to the causative relationship.

Unless a careful history is elicited and the physician is familiar with symptoms caused by hernia, errors in diagnosis may occur. The chief cause of error is in accepting a roentgenological report that a hernia is not present unless the patient has been examined carefully in a Trendelenburg position. Even after careful study a hernia may be overlooked on one examination and may be clearly demonstrated at a later time.

A frequent symptom of hiatal hernia, both in the para-esophageal and short or sliding type is difficulty in swallowing, and yet this feature may be overlooked by both physician and patient. When the physician asks, "Do you have trouble in swallowing?"—the patient may infer that what is meant is whether he has trouble in initiating the act of deglutition rather than whether food actually sticks momentarily in the lower portion of the esophagus before passing into the stomach. The sticking of food may occur at intervals of a month or more and the patient may not remember this infrequent symptom unless he is especially questioned. In other patients, hernia is the obvious cause for complete obstruction of the lower portion of the esophagus by a bolus of food—especially meat.

Gas and distress after meals, a frequent symptom of hiatal hernia, also occurs in many other conditions, and is especially noted in patients who are said to suffer from "nervous indigestion" and, even when hernia is demonstrated by roentgenoscopic study, there may remain a doubt as to whether the abnormality is the cause of symptoms.

Attacks of acute substernal pain with radiation to the neck and down one or both arms immediately suggests the presence of disturbance in coronary circulation and yet hiatal hernia may cause identical symptoms. Pain from hernia that comes in attacks is usually the result of spasm at the junction of the esophagus and stomach, whereas a burning type of pain most likely results from ulceration at the same area. However, ulceration cannot always be demonstrated in patients in whom this symptom is especially annoying, and pain may be absent when marked ulceration is present.

Acute crampy attacks of pain and the dull burning variety seldom, if ever, occur in the same patient. The former is usually relieved immediately and permanently by the passage of a dilating sound, sized 60 F, through the esophagus; whereas, the burning type of pain may fail to respond to any type of therapy and may be increased by dilation.

Stricture at the junction of the esophagus and hernial sac occurs in from 10 to 15 per cent of patients who have the short or sliding type of hernia, but previous bleeding or other evidence of ulceration may be absent. In other patients symptoms may suggest that ulceration has been present for a considerable period of time without scar formation in the esophagus.

There is no doubt that many patients have a short or sliding variety of hiatal hernia without exhibiting symptoms that can be definitely attributed to this abnormality. On the other hand, I believe that every patient with the para-esophageal variety has distress that is caused by the hernia.

Ulceration in the esophagus is less frequent in

PORTER P. VINSON, M.D., *Professor of Bronchoscopy, Esophagoscopy and Gastroscopy, Medical College of Virginia.*

Received for publication, February 18, 1955.

para-esophageal hernia than in the short esophagus type, but I have observed stricture in at least three patients with the former type of hernia. Ulceration with bleeding in para-esophageal hernia usually occurs in the portion of stomach constricted by the diaphragm or in the segment within the thorax. Symptoms from both types of hiatal hernia are apt to be identical, and differential diagnosis must be made from roentgenoscopic and esophagoscopic examination.

"Heart burn" or regurgitation of gastric secretion into the lower portion of the esophagus is not a frequent symptom of hiatal hernia—certainly not as frequent as in patients who suffer from chronic infection in the gall bladder. If "heart burn" and regurgitation were entirely responsible for so-called "peptic esophagitis" and for formation of stricture at the junction of the esophagus and hernial sac, identical changes would occur in patients who suffer from digestive symptoms associated with chronic cholecystitis, functional types of regurgitation, and hysterical vomiting. I am not aware of any patient who has developed esophageal stricture in association with these conditions.

Forced vomiting over long periods of time and pernicious vomiting of pregnancy have occasionally resulted in digestion and rupture of the esophagus. This condition has been described as esophago-malacia and is sometimes followed by stricture. Few patients with this type of stricture have been recorded in the past twenty-five years.

Evidently inflammatory reactions in the lower esophagus, associated especially with the short or sliding type of hiatal hernia, do not necessarily result from regurgitation alone, and I believe there is evidence to suggest that other factors are more important in causing ulceration, bleeding, and the formation of stricture.

In earlier reports of hiatal hernia the type that is now described as "sliding" was referred to as congenital shortening of the esophagus with partial thoracic stomach. Little or no consideration was given to the congenital origin of para-esophageal hernia.

As it has not been our custom to recommend operation on hiatal hernia, other than the para-esophageal variety, I am not qualified to state whether there is actual congenital shortening of the esophagus in the so-called short esophagus type, or whether the esophagus is normal in length. Apparently surgeons who have operated on this type of hernia believe that congenital shortening of the esophagus occurs infrequently.

The rarity of congenital abnormalities in Negroes is well known in the South, but may not be generally recognized in other localities. Anomalies of the esophagus that may be of congenital origin are rare in Negroes, while other lesions are equal in number to those in white people in accordance with the comparative density of population. Pharyngo-esophageal diverticulum has not been observed in our hospitals in a Negro, and the usual type of congenital anomaly associated with esophago-tracheal fistula is many times more frequent in white infants than Negroes, the number of hospital births being about equal in the two races.

In a group of 272 hiatal hernias that I have reviewed, 29 were of the para-esophageal type and none of these was observed in a Negro. Two hundred and forty-three (243) were designated as short, or sliding, and of this number 17 only were observed in Negroes. Negroes compose at least a third of our hospital patients and a larger percentage of those seen in the outpatient department. At least a fourth of the Negroes who had this type of hernia were almost white in appearance. These figures suggest that basically hiatal hernia of all types is congenital in origin.

What, then, is the cause for symptoms from the sliding variety of hernia and the reason that they do not appear earlier in life? Symptoms from para-esophageal hiatal hernia may occur at any age, but significant discomforts from the sliding type are usually deferred until the patient is more than forty years of age. The reason for this delay in appearance of symptoms is not apparent, but spasm at the junction of the esophagus and hernial sac is probably the initial factor in causing symptoms. Severe intermittent substernal pain and dysphagia result from spasm. Inflammation and ulceration with bleeding occur from stagnation of secretion in the esophagus. This is comparable to conditions observed in prostatic hypertrophy when inadequate drainage from the bladder is followed by inflammatory reaction in the urinary tract. If ulceration in the esophagus is severe, and long continued, scar tissue forms and stricture results.

Ten to fifteen per cent of our patients with the sliding type of hernia have definite evidence of the formation of sufficient scar tissue to cause obstruction to the passage of a 45 French sound into the stomach. In 85-90% a sound, sized 60 French, can be passed into the stomach over a guiding thread

without detecting obstruction, although this fact does not necessarily indicate that the area is entirely free from scar tissue.

When a sound size 60 F. is passed through the esophagus into the stomach, dysphagia and the severe crampy type of pain is promptly and usually permanently relieved. Bleeding seldom recurs and even the feeling of fulness after meals is diminished or entirely eliminated. When stricture is present, subsequent dilations are almost always required at irregular intervals, but periods of relief from symptoms may continue for several months or years.

Stricture associated with hernia is always short, but requires the passage of much larger sounds to afford relief than stenosis from other causes. Prolonged relief from dysphagia will not occur unless the stricture is dilated with sounds of 49 to 53 French in caliber. The symptom that is least likely to be relieved by dilation is the burning type of substernal pain.

Two of my patients with stricture associated with the sliding type of hernia were operated on elsewhere. In one, resection of the stricture was done with fatal outcome. In the other, operation consisted in replacing the herniated portion of the stomach below the diaphragm. Subsequent observation revealed recurrence of the hernia and persistence of symptoms. Even when bleeding is the only symptom of sliding hiatal hernia, I believe that the passage of sounds through the esophagus improves drainage and promotes healing of the area of ulceration. Hemorrhage may be severe enough to justify blood transfusions, but I have never known of a patient who had fatal bleeding from hiatal hernia. Dilation can be made without fear of precipitating further bleeding and hemorrhage seldom recurs subsequent to treatment even when stricture is present.

Fear of development of malignant degeneration in the scar of stricture associated with hernia does not justify surgical treatment. Benign stricture occurring in hernia may lead to an erroneous diagnosis of carcinoma, but, unless malignant cells are identified by a competent pathologist, resection of the esophagus is inadvisable.

As the majority of symptoms from a short esophagus or sliding type of hernia can be relieved by passing dilating sounds through the esophagus, other operations are not necessary. This is especially true since there are very few serious complications from this condition if the lumen of the esophagus is adequately maintained.

Patients having pain and dysphagia from para-esophageal hernia may be temporarily relieved from these symptoms by passing sounds through the esophagus, but surgical treatment should be recommended if the general condition of the patient will permit operation without undue risk. Para-esophageal hernia has a tendency to enlarge and cause increasing distress and ulceration and strangulation present definite hazards to life. Complete investigation of the esophagus should be made prior to operation.

Summary

1. Hiatal esophageal hernia is of two varieties: (a) para-esophageal, (b) short esophagus, or sliding type.
2. The sliding type of hernia may be present without producing symptoms. Rarely, if ever, is this true with the para-esophageal variety.
3. Symptoms from both types of hiatal hernia consist of pain, bleeding, dysphagia, and upper abdominal distress. Differentiation must be made by roentgenoscopic and esophagoscopic examination.
4. All hiatal hernias are probably congenital in origin.
5. Spasm of the lower end of the esophagus is responsible for initiation of symptoms.
6. Ulceration in the esophagus is caused by stagnation of secretions resulting from spasm.
7. Surgical treatment of the sliding type of hernia is not required, as symptoms can be relieved by passing sounds over a guiding thread through the esophagus. The presence of the abnormality does not constitute hazard to life if the lumen of the esophagus is properly maintained.
8. If esophagitis in sliding hiatal hernia is caused by regurgitation, dilation of the esophagus should increase symptoms instead of providing complete comfort for the majority of patients in whom stricture has not occurred and adequate relief by occasional passage of sounds for those in whom scar tissue has narrowed the lumen of the esophagus.
9. The dull burning type of substernal pain associated with sliding hiatal hernia frequently persists in spite of therapy.

Further Experiences with the Femoral Head Prosthesis in Fractures and Arthritis of the Hips

GEORGE A. DUNCAN, M.D.
GEORGE G. HOLLINS, JR., M.D.
JOHN S. THIEMEYER, JR., M.D.
Norfolk, Virginia

THIS paper is based on our experience over the past 3½ years with replacement of the femoral head by a metal prosthesis for fractures of the neck of the femur or for arthritis of the hip. Thirty-four patients were operated upon by the authors between May 11, 1951, and October 25, 1954. An earlier report was given in the Virginia Medical Monthly in February, 1953.

There were 27 patients with femoral neck fractures. In eight of these the operation was a primary procedure. There were two principle reasons that no other treatment was attempted in these cases. First, the duration of the fracture when we first saw the patient was one to eight months in five cases, and it was felt the prospects of union following reduction and nailing were poor. Secondly, in three cases the fracture was but a few days old but it was felt that the disoriented mental status with incontinence of urine would make post-operative control of the patient difficult. The ages of these three were 77, 79, and 80 years, and all three were done in the past year.

The other 19 patients had all been previously treated by reduction and fixation with a Smith-Petersen nail. This was unsuccessful because of failure of union, extrusion of the nail, or avascular necrosis. In one case union had taken place and symptoms of necrosis of the head appeared three years later.

The time between the original nailing and the prosthesis replacement varied between 18 days and 4 years, with an average of 7½ months.

Of these 27 patients, 25 were female and 2 were male. The ages of the males were 48 and 52. The ages of the females varied from 52 to 80. There were 3 in the 6th decade, 4 in the 7th, 14 in the 8th and 2 whose ages were just 80.

The prostheses used were all metal, either stainless steel or vitallium. The types and the number of times each was used were as follows: Lorenzo-1, Collison-2, Eicher-3, J.E.M. Thomson-4, Fred Thompson-7, and modified Judet-10. In one case the Fred Thompson type was first used but was removed and replaced by the Collison.

There were six complications. These were fractures of the femur in 4 and dislocation in 2. The fractures all occurred with the intramedullary stem type of prosthesis. Three occurred in the femoral neck or trochanteric region with the Fred Thompson type and one in the upper third of the shaft with an Eicher type. There was one death attributed to surgery. This was a pulmonary embolus on the 8th post-operative day.

Out of these 27 hip fractures, 17 were operated upon a year or more before this study. Of course, a number have since died but it was possible to obtain follow up results of 13 patients out of those 17. Five were followed 3 years, five 2 years and three 1 year. The follow up was in some cases by personal examination and some by reply to questions sent out on cards. In each case note was made as to pain, the range of hip motion, the need for crutch or cane, and the amount of limp. Of the 13 cases followed one or more years, 4 had no pain, 7 had mild or occasional pain, and 2 moderate pain. One had excellent motion, 6 good and 6 fair (motion was rated as good if the patient could put on her own shoe and stocking). Four used no crutch or cane, 5 used either one cane or one crutch, 3 used 2 crutches or 1 crutch and cane, or 2 canes, and 1 used a walker only. Eight had a mild limp, 3 moderate, and 2 severe.

Of the 5 cases followed 3 or more years, the figures for pain were 2 none and 3 mild. The figures for motion were 1 excellent, 1 good, and 3 fair. For crutches and canes, the figures were 3 none, 1 using 1 cane or 1 crutch, and 1 using a cane and a crutch. For limp, the figures were 4 mild and 1 moderate.

The results as related to the type of prothesis are shown in the accompanying table. There were some good results with nearly all types. However, the proportion of better results was higher with some types than with others and some we no longer use. The two being used in the recent cases are the Fred Thompson and J. E. M. Thomson.

Read before the Seaboard Medical Association, November 14-15, 1954, at Wilson, N. C.
Received for publication January 5, 1955.

It appears that from the standpoint of motion and need for crutches or cane, the best results were obtained with the Fred Thompson prosthesis, and this was the one used in the only case, excellent in all respects, with no pain, excellent motion, no cane or crutch, and limp only when tired. The J. E. M. Thomson prosthesis has been used for neck fractures only since December, 1953, and is, therefore, not included in the follow-up study. It appears to be best suited for subcapital fractures where most of the neck is preserved.

There were 7 patients who had femoral head replacements for arthritis between May 14, 1951, and July 13, 1953. One patient had both hips done. There was one case of rheumatoid arthritis with ankylosis, 3 cases of osteo-arthritis, 2 cases of bilateral avascular necrosis of unknown etiology, and one case of arthritis, following slipped upper femoral epiphysis. Four different types of prosthesis were used. There was no operative mortality, but there was one fracture of the upper femur, and in one the stem of a prosthesis protruded so far beyond the bone that a later operation to cut it short was made necessary by pain.

All 7 were followed for at least one year, 3 were followed over 2 years, and 1 over 3 years. The results do not compare favorably with those of the fracture cases. Three had slight or occasional pain, one had moderate pain, and 3 of the 7 complained of severe pain at least part of the time. Motion was good in two, poor in four, and complete ankylosis in one. Two used no cane or crutch, one used one crutch when out doors only, one used one crutch constantly, and three used two crutches. Only two could be considered having a good result in all respects, having slight pain, good motion and no crutches.

In conclusion, we feel that study of the results following prosthesis replacement of the femoral head for certain femoral fractures justifies further use of the procedure. The bone appears to tolerate the metal for long periods, and no late complications have appeared. The results appear to be as good or better than with other hip reconstruction procedures, and have the advantage of allowing early ambulation and shortened periods of hospitalization. Elderly people appear to tolerate the operation satisfactorily. They can usually be up in a chair by the 2nd or 3rd day and walking with help by 10 days to 2 weeks. It is our growing conviction that this method should be used more frequently as the primary treatment in patients in their late seventies or older, rather than keeping them in bed or chair for six months or more, waiting for the union of a fracture which may never take place.

For arthritis of the hip, arthrodesis still appears to be the operation of choice when severe symptoms indicate surgery. In cases in which both hips are involved, the worst hip can be fused and the other treated by prosthesis replacement.

343 Wainwright Building.

Thirteen Cases Followed one to Three Years

Type	Number Used	Pain	Motion	Crutches or Cane	Limp
Lorenzo	1	Mild	Fair	One	Mild—1
Collison	2	None—1 Mild—2	Fair—2	None—1 Crutch and cane—1	Slight—2
Eicher	2	None—1 Mild—1	Good—2	One crutch—2	Mild—2
Fred Thompson	3	None—1 Mild—1 Moderate—1	Excellent—1 Good—2	None—2 One crutch—1	Slight—1 Moderate—2
Judet	5	None—1 Mild—3 Moderate—1	Good—2 Fair—3	None—1 One cane—1 Two crutches—1 Walker—1 Two canes—1	Slight—3 Severe—2

Leukemoid Reactions: Four Brief Case Reports

O. B. BOBBITT, M.D.
W. E. BRAY, M.D.
Charlottesville, Virginia

IT IS well known that immature leukocytes and/or very large number of leukocytes may be found in the peripheral blood in the absence of leukemia. The terms leukemoid reaction, or pseudoleukemia, are usually applied in these cases. The variety of conditions associated with leukemoid reactions is great and in many instances the diagnosis is obvious from clinical observation. In some cases the peripheral blood, bone marrow and clinical picture cannot be distinguished from leukemia, even in the presence of concurrent disease, until the correct diagnosis is made obvious by the natural history of the disease, or at autopsy. The many causes of leukemoid reactions are reviewed by Hill and Duncan,[1] Heck and Hall,[2] Forkner,[3] and Leitner.[4] Recent case reports supplementing these reviews include those of Whittemore and Sticks,[5] Kracke,[6] Duncan,[7] Lorenz, *et al.*,[8] Riley and Robins,[9] Bickel,[10] Gardner and Mettier[11].

Myelocytic leukemoid reactions have been described by these authors in the following conditions: osteomyelitis, fractures of bone, carcinoma with and without metastases to bone, chronic infectious granulomata of bone, tuberculosis, pyogenic infections (pneumonia, pyelonephritis, peritonitis, empyema, pulmonary abscess, mastoiditis, puerperal sepsis), acute hemolytic diseases, following severe hemorrhage, polycythemia, pernicious anemia, essential thrombocytopenia, granulocytopenia—recovery phase, diabetic coma, Hodgkins' disease, lymphosarcoma, osteosclerosis and osteofibrosis, multiple myeloma, lipoid histiocytosis, prelethal states, mercury poisoning, mustard gas poisoning, phenylhydrazine poisoning, benzene poisoning, sulfonamide poisoning, bee sting, malarial infection, severe burns, eclampsia.

Lymphocytic leukemoid reactions have been reported in the following: pertussis, chicken pox, measles, acute infectious lymphocytosis, carcinoma of the stomach with and without metastases, infectious mononucleosis, typhoid, congenital lues, tuberculosis.

According to Leitner, in lymphocytic leukemoid reactions the marrow is not infiltrated with lymphocytes; however, Duncan[7] reported 86% lymphocytes in marrow of acute infectious lymphocytosis. The later observation was not confirmed by Lorenz *et al*[8]. It will be noted in the case reports below, that examination of the marrow in no instance was helpful in differentiating between leukemia and a leukemoid state.

It is stated that, usually in leukemoid reactions the morphology of the cells is more normal than in leukemia, that the degree of shift to immature forms is less marked,[1] and that toxic granulation, basophilia and vacuolation tend to indicate a leukemoid reaction[2]. The authors have not been impressed with the aid of these observations in the individual case.

Case Reports

Four case histories of patients with leukemoid reactions are briefly presented, one associated with miliary tuberculosis, one with metastatic carcinoma, and two with systemic mycotic disease.

Case #1. History No. 260969. Colored female, aged 62.

History.—A large weight loss was noted in the year before admission. For three months there had been a non-productive cough, fever and malaise. Four days before admission, slight hemoptysis and left pleuritic pain occurred.

Physical and Laboratory Findings.—The patient appeared chronically ill and emaciated. The temperature ranged between 99°-103°F. Marked generalized adenopathy was present and the liver was enlarged to the umbilicus. The spleen was not palpable. In the thorax a homogenous density in the right middle lobe and right hilar adenopathy were demonstrated. The hemoglobin was 8.5 gm./100 ml., the leukocytes, 3,000/mm.^{3} and the platelets were decreased. In the peripheral blood were 27% large plasma (?) cells, many with nucleoli, 43% normal lymphocytes, 10% pathologic lymphocytes, 8% bands and 12% segmented polymorphonuclears. In the sternal marrow were 18% plasma (?) blasts, 34% plasma cells, 24% plasma cells or small lymphocytes (?), 18% degenerated cells, and 6% granulocytes.

Autopsy.—The patient died on the eighth hospital day. Fresh caseous tuberculosis and tubercle bacilli

From the Department of Clinical Pathology, University of Virginia School of Medicine, Charlottesville.
Received for publication January 26, 1955.

were found in the lungs, liver, spleen, kidneys, bone marrow, and lymph nodes. The lymph nodes were greatly enlarged and the architecture replaced by reticulum cells. The tubercle bacillus was of the bovine strain. Leukemic infiltrations *per se* were not found. It was concluded that this leukemoid reaction resulted from widely disseminated tuberculosis in a highly sensitized individual, as indicated by the number and size of the fresh caseous lesions.

Case #2. History No. 262309. Colored female, aged 69.

History.—For one month before admission there had been present a non-productive cough, pleuritic pain, dyspnea and malaise.

Physical and Laboratory Findings.—The patient appeared chronically, but not terminally, ill. There were several large anterior cervical and supraclavicular nodes. The spleen and liver were not palpable. The hemoglobin was 12.5 gm./100 ml., and the leukocytes 150,000/mm.^{3} The platelets were not counted. In the peripheral blood were 1% myeloblasts, 1% promyelocytes, 16% myelocytes, 4% bands, 76% segmented polymorphonuclears and 2% small lymphocytes. In the sternal marrow there were 1% myeloblasts, 18% promyelocytes, 27% myelocytes, 3% juveniles, 19% bands, 27% polymorphonuclears and 5% small lymphocytes—suggesting an arrest phenomenon. Slight erythroid hypoplasia was present.

Autopsy.—Death unexpectedly followed biopsy of a supraclavicular node. Papillary adenocarcinoma was found, probably arising from the right lower bronchus, metastatic to the thyroid, heart, lungs, liver, kidneys and many lymph nodes. The bone marrow was hyperplastic but the expected leukemic infiltrations in other tissues were not found, and the spleen weighed 122 grams. It was concluded that the leukemoid blood picture was due to the metastatic carcinoma.

Case #3. History No. 256918. White male, aged 52.

History.—For three weeks before admission the patient had cough and purulent sputum and did not respond to sulfonamides. Four months earlier he had a similar episode at home with apparent recovery. For three days prior to admission scattered pustules and papules of varying size had been present.

Physical and Laboratory Findings.—The patient appeared mildly ill. The temperature ranged between 99°-103°F. Palpation revealed one large node in the left axilla, the spleen 8 cm. below the costal margin, the liver not enlarged. A large left pleural effusion was found to be sero-sanguineous and sterile. Study of the peripheral blood showed a hemoglobin of 9.5 gm./100 ml., leukocytes 4,000/mm^3, and the platelets decreased. Of the leukocytes, 75-90% were lymphocytes, most of which were small, a few with distinct nucleoli, many with nucleolar remnants, and opaque, blue-grey, cytoplasm (Wright's stain). In the sternal marrow 50% of the leukocytes were like those described in the peripheral blood. The initial impression was that this represented an unusual lymphocytic leukemia. Then *Blastomyces dermatitidis* was found in, and cultured from, an axillary node, pustules, bronchial washings, and prostatic secretions. Penicillin and potassium iodide were without apparent effect.

Autopsy.—The patient died in another hospital eight weeks after onset of definite symptoms. No autopsy was performed.

We feel justified in assuming this patient had a leukemoid reaction.

Case #4. History No. 212350. White female, aged 58.

History.—The patient had noted cervical adenopathy for two years and a large weight loss. There had been a cough for two months, with mucoid sputum and mild night sweats for one month.

Physical and Laboratory Findings.—On the first admission the patient did not appear ill and was afebrile. There was generalized discrete adenopathy. The largest node (2 cm. in diameter) was in the cervical region. The spleen was not palpable. The liver was 4 cm. below the costal margin. The hemoglobin was 11 gm./100 ml., the leukocytes, 42,000/mm.^{3} and the platelets normal in number. In the peripheral blood were 3% bands, 2% segmented polymorphonuclears, 91% lymphocytes and 4% eosinophiles. Degenerated cells numbered from 12 to 30%. In the sternal marrow were 10% blasts, 1% segmented polymorphonuclears, 66% lymphocytes and 23% degenerated cells. After 10 months of progressive anorexia, weight loss and dyspnea, the hemoglobin was 10 gm./100 ml., the leukocytes, 18,000/mm.,^{3} and the platelets were decreased. The peripheral blood showed 3% myelocytes, 3% juveniles, 29% bands, 21% segmented polymorphonuclears and 44% lymphocytes. One week later, after two transfusions, the differential showed 71% lymphocytes, of which 14% were considered very immature. Many of these cells had clefted nuclei but no nucleoli were noted. At this time the patient became disoriented and *Cryptococcus neoformans* was found in the cerebrospinal fluid.

Autopsy.—The Cryptococcus was demonstrated in the brain, meninges, liver, kidneys, spleen and lymph nodes. The spleen was normal in size. The lymphocytic infiltration of the viscera was minimal, and the earlier presumptive diagnosis of lymphocytic leukemia was excluded on that basis.

Comment

The atypical plasma cell-lymphocytic leukemoid reaction in Case #2 associated with metastic adealized tuberculosis in a highly sensitized individual, has been reported several times. The leukemoid reaction in *Case #2* associated with metastic adenocarcinoma is of interest because only six cases have been reported with leukocyte counts over 100,000/mn.[3] Cases #3 and #4 associated with systemic fungus infections appear to be of particular interest, as no other similar reports were found in the literature.

It may be worthy of note that we have observed one case of chronic myelocytic leukemia of four years duration in which at autopsy typical leukemic infiltrations were found, and *Cryptococcus neoformans* demonstrated in a lung lesion known to have been present on x-ray for 9 weeks. These organisms were also demonstrated in a peri-bronchial lymph node. It is also of interest that one of the three cases of Torula infection of the central nervous system reported by Magruder[12] was diagnosed chronic lymphocytic leukemia four years before autopsy confirmed both diagnoses.

Summary

Four brief case reports of leukemoid reactions are presented:

1. An atypical plasma cell-lymphocytic leukemoid reaction associated with miliary tuberculosis.
2. A myelocytic leukemoid reaction associated with metastatic carcinoma.
3. A lymphocytic leukemoid reaction associated with systemic blastomycosis.
4. A lymphocytic leukemoid reaction associated with systemic torulosis.

Previous reports of such reactions associated with systemic mycotic infection have not been found.

Bibliography

1. Hill, J. M., and Duncan, C. N.: Leukemoid Reactions. Am. J. M. Sc., 201: p. 847, 1941.
2. Heck, F. J., and Hall, B. E.: Leukemoid Reactions of the Myeloid Type. J.A.M.A., 112: p. 95, 1939.
3. Forkner, C. E.: Leukemia and Allied Disorders. The Macmillan Company, 1938.
4. Leitner, S., Translated and edited by Britton, C. J. C., and Newmark, E., Grune and Stratton, New York, 1949.
5. Whittemore, W. L., and Stich, M. H.: Leukemoid Reaction to Sulfadiazine. New York J. Med., 42: p. 1249, 1942.
6. Kracke, R. R.: The Effects of Sulfonamide Drugs on the Blood. Am. J. Clin. Path., 14: p. 191, 1944.
7. Duncan, P. A.: Acute Infectious Lymphocytosis. Am. J. Dis. Child, 66: p. 267, 1943.
8. Lorenz, M., Hardy, M. L., and Alt, H. L.: Infectious Lymphocytosis in Brothers. J.A.M.A., 131: p. 882, 1946.
9. Riley, J. A., and Robins, G. M.: Leukemoid Reactions Due to Mixed Malarial Infection. Blood, IV: p. 283, 1949.
10. Bichel, J.: Lymphatic Leukemia and Lymphatic Leukemoid States in Cancer of the Stomach. Blood, IV: p. 759, 1949.
11. Gardner, F. H., and Mettier, S. R.: Lymphocytic Reactions of the Blood Associated with Miliary Tuberculosis. Blood, IV: p. 767, 1949.
12. Magruder, R. G.: A Report of Three Cases of Torula of the Central Nervous System. J. Lab. Clin. Med., 24: p. 495, 1939.

Health

Is people; it begins with the individual in his home and spreads to the family and the community in which he lives. Health is a quality of being—expressed in terms of wealth, contentment, and productivity. Public health is the summation of personal health and no community can be more healthful than the people who reside therein. Henry F. Vaughan, Dr. P.H., Am. J. Pub. Health, Mar., 1955.

The Treatment of Peripheral Vascular Diseases—Diseases of the Veins

EUGENE L. LOWENBERG, M.D.
Norfolk, Virginia

THE enormous strides in arterial vascular surgery have focused attention away from varicose veins and other venous problems, although they probably account for more morbidity than all of the other vascular diseases together. I doubt if this is warranted by our present knowledge of these diseases. Assuredly many cases of varicose veins cannot be explained by the time honored explanation of valvular incompetency and retrograde flow of blood. And, in spite of much research, the actual cause of thrombosis of the deep veins remains unknown.

The standard treatment of varicose veins has become high ligation plus removal of the main stem of the long and short saphenous system and all of its varicose branches. Simple high ligation followed by sclerotherapy has been found to be wholly inadequate. Multiple ligations have not only failed to help the situation, but have actually stimulated the development of more extensive varicosities and rendered a second procedure a most difficult proposition indeed. The author feels that thorough removal of each and every varicose vessel is almost as important as the high and radical saphenous ligation itself. In the average case this can be accomplished by painstaking work with the internal and external strippers. Perforator veins should be ligated subfascially as encountered rather than evulsed. Perforator veins are especially apt to be found in relation to cirsoid masses of varicose veins and in the post-thrombophlebitic state. In aggravated cases of varicose veins the author prefers to make long incisions from groin to knee and from knee to ankle and to turn back the skin flaps and remove under direct vision the subcutaneous tissue, the varicosities and the perforator veins. The treatment of varicose veins should be individualized and the management of each case based on the findings and presumed pathological physiology. Marking of the varicose veins with 20% silver nitrate prior to the surgery lends thoroughness to the procedure. Sclerotherapy remains an important adjuvant in the treatment of varicose veins. It is particularly suitable for:

1. Early isolated varicosities not associated with a give-away of the greater saphenous vein.
2. For superficial phlebectasias.
3. As a supplement to the surgical procedure, veins overlooked at surgery being injected.
4. For varicosities of pregnancy.

Telangiectases and spider bursts may also be improved by injection. We use a 25 gauge needle and sotradecol 1% foam. Sotradecol, 1% and 3%, furnished by Wallace and Tiernan Company has been found to be the best sclerosing agent for the injection treatment of varicose veins. Allergic reactions are extremely unusual with these solutions.

Varicosities of Pregnancy

Pregnancy is a vigorous stimulus to the development of varicose veins. There is increased blood volume, smooth muscle relaxation under the effect of the ovarian steroids, pressure in the pelvis from the gravid uterus, an AV fistula in the placenta, opening up of arteriovenous shunts about the ankle and an increased tendency to blood vessel growth. The varicosities of pregnancy seem different from the common greater and lesser saphenous vein varices. Varicosities of pregnancy are more diffusely and atypically distributed. They are prone to be present about the foot and ankle, over the lateral aspect of the leg and thighs and in the vulva. The venous engorgement and large and small clusters of varicosities cause the leg to have a violaceous coloration. Cirsoid venous masses are common. The impression is that numerous perforator veins, normally competent, are now incompetent, permitting free reflux of blood from the deep to the superficial veins. The veins thrombose readily and acute spontaneous thombosis in the varicosities of pregnancy is not uncommon.

The author feels that surgery is contra-indicated in such a situation and prefers to do no saphenous vein surgery until the childbearing period is over. When multi-parity exists and varicosities are extensive the varicose veins are considered an ethical indication for tubal ligation and simultaneous saphenous vein surgery. In many instances we have performed the saphenous vein surgery in the postpartum period while the patient was still in the hospital for her last confinement.

From the Vascular Disease Service of Norfolk General Hospital.
This article represents part of a paper presented before the recent meeting of the Tri-State Medical Society.
Received for publication March 28, 1955.

On the other hand, the injection treatment of the varicosities of pregnancy is of great value during the ante-partum period. It is entirely safe and the veins readily firmly thrombose due to the natural added clotting tendency of the blood in this state. The injections get rid of the more uncomfortable varicosities and tend to inhibit the development of more varicosities. There is less chance of the patient developing superficial or deep vein thrombophlebitis during confinement. After the pregnancy is terminated it will often be found that the patient no longer has varicosities of significance.

Spontaneous Phlebitis in Surface Veins

Spontaneous phlebitis in a superficial vein may signify:

1. Acute spontaneous thrombophlebitis in varicose veins.
2. Simultaneous superficial and deep phlebitis.
3. Migratory phlebitis.
4. Buerger's disease.
5. Obscure malignancy.

Acute Spontaneous Ascending Thrombophlebitis in Varicose Veins

Acute spontaneous thrombophlebitis in varicose veins is readily diagnosed, for the inflammatory process can be seen and felt as a relatively broad area of redness, heat, tenderness and firmness in line with the varicosed great saphenous vein. The author considers the condition a relative surgical emergency. If untreated, the process tends to spread to the femoro-saphenous junction, or, more significantly, tends to spread through the perforator veins into the deep venous system. It thus becomes a disease that is not without danger. Bed rest and conservative management seem to prolong and perpetutate the process rather than arrest it. Days or weeks may go by with the inflammation continuing and the thrombotic process gradually spreading. If medical treatment at all is to be instituted, it should be in the form of continued ambulation, local support of the inflamed process with an Unna paste boot or an Elastoplast bandage (as short strips over the inflamed vein, and not as a circular affair) and ambulatory anti-coagulant therapy. The anti-coagulant therapy, of course, must be under laboratory control, even though the patient is ambulatory and out of the hospital. Under such a program the acute inflammation will subside in a few days, but the patient will be left with tender occluded veins, with his varicosities, and with the probability of additional episodes of acute inflammation as recanalization of the thrombosed areas develops.

Urgent surgery is recommended as a treatment of choice for acute spontaneous thrombophlebitis in the varicosed saphenous vein for three reasons:

1. It brings to an abrupt end the inflammatory process.
2. The slight element of grave danger is eliminated.
3. The patient is once and for all rid of his varicose veins.

The surgery performed consists of a high saphenous ligation plus a removal of the varicosed saphenous system including the thrombophlebitic area. We do not hesitate to strip out the inflamed thrombosed vein, or to incise it, or excise it. The inflammatory reaction is entirely non-bacterial and aseptic.

Frequently the thrombophlebitic process will be found to have extended to the femoro-saphenous junction. In such instances, it is advisable to incise the anterior wall of the saphenous vein just below the femoro-saphenous junction and to remove by suction or with forceps the thrombus at this area. The vein may then be divided and the usual high saphenous ligation performed.

Combined superficial and deep thrombophlebitis is far from rare. Every case of acute spontaneous thrombophlebitis in varicose veins should be carefully examined for evidences of concomitant deep vein involvement. If there is deep calf tenderness, tenderness along Hunter's canal, or a positive dorsiflexion test, the surgery should include an exploration of the superficial femoral vein in addition to the saphenous vein surgery. If pulmonary embolism has occurred, this is all the more important, for the embolus has in all probability originated from the deep veins rather than from the surface veins.

Varicose Leg Ulcers

Unquestionably most varicose ulcers will heal with bed rest or with supportive therapy in the form of Unna paste boots or Elastoplast bandages. Healing, however, is with scar tissue and recurrence is the rule when the patient returns to work or sustains the slightest injury. It is a mistake to promise a patient with varicose veins that eradication of his varicosities will permanently cure his ulcer. Often the ulcer rest on an irreversibly fibrosed bed and is surrounded by diseased skin. Eradicating the cause will no more eliminate the sequelae than would putting out a fire restore the paint on the wall.

In addition to radical saphenous vein surgery as described above, the author prefers radical surgery for all except the most early and superficial varicose ulcers. At the same operation, the saphenous vein is

ligated and its main trunk and branches removed by stripping or excision, the ulcer and the surrounding diseased skin with its underlying fibrosed subcutaneous tissue and fascia are excised, and the defect covered with a split thickness graft taken from the thigh. As a rule this results in placing normal skin on normal vascularized muscle or occasionally on healthy tendon sheaths. It should be understood that no matter how horrible a limb diseased by venous stasis appears, there is a normal limb at the muscle level. The more extensive and radical the surgical debridement is, the better are the results.

All leg ulcers are not varicose in cause. We recognize the post-thrombophlebitic ulcer, the hypertensive ulcer, the ischemic ulcer, the neurotrophic ulcer, mycotic ulcer, ulcers from trauma and pyogenic infection and, finally, erythema indurata. The treatment of post-thrombophlebitic ulcer is discussed later on in this paper. The hypertensive ulcer, first described by Martorell of Barcelona, occurs as a more or less circular punched out ulcer over the anterior or lateral aspect of the leg. The patients all had hypertension and the ulcer is really one of peripheral small blood vessel disease—that is, an ischemic ulcer. We recommend again surgery for such ulcers, the surgery consisting of excision and skin graft. Neurotrophic ulcers occur as a breakdown of callus under the big toe or sole of the foot in diabetic patients. They are extremely resistant to treatment. We usually recommend that the patient use crutches so as to avoid all walking on the foot. We pare down the callus at regular intervals and endeavor to inhibit its formation with the use of bichloracetic acid or podophyllin in oil.

Diseases of the Deep Veins of the Lower Extremities

We find it practical to adhere to the classifications of phlebothrombosis for a bland thrombotic process of the deep calf veins and femoro-iliac thrombophlebitis for the usual inflammatory process in the groin known as milk leg.

Phlebothrombosis

The current trend is to treat uncomplicated phlebothrombosis of the calf by anti-coagulant therapy, and the author is in agreement with this therapy for the average case. However, we are apt to resort to surgery in the form of a superficial femoral vein ligation under the following circumstances:

1. When anti-coagulant therapy is contra-indicated, as in hepatic insufficiency and jaundice, active tuberculosis, the post-operative period following gastrectomy, the ante-partum or post-partum period in pregnancy.
2. Phlebothrombosis, when a second stage operative procedure is planned or developing during a pre-operative period of hospitalization for surgery, such as for a prostatectomy.
3. Phlebothrombosis, when a return to active ambulatory activity is contra-indicated, such as in a bad cardiac patient.
4. Phlebothrombosis developing towards the end of a hospital stay from delivery, or from some surgical procedure that has already required considerable time in the hospital.
5. A failure of the phlebothrombosis to respond to anticoagulant therapy.
6. When there is a history of previous episodes of thrombosis or embolism.
7. Phlebothrombosis complicated by pulmonary embolism. The first indication of embolism is an indication for the author to perform surgery. The patient who has survived an embolus has a 50% chance of having another one, and between a 25% to 35% chance that this additional embolic attack will be fatal.
8. Recurrence of phlebothrombosis when the anti-coagulant therapy is discontinued.
9. Phlebothrombosis in the very aged.
10. Phlebothrombosis developing concomitant with acute arterial thrombosis or chronic arterial insufficiency.
11. Phlebothrombosis developing in the ambulatory patient carrying on his normal activities.

Acute Ilio-Femoral Thrombophlebitis

The time honored management of acute femoro-iliac thrombophlebitis consists of elevation of the limb, voluminous warm compresses from ankle to groin, active anti-coagulant therapy, and repeated paravertebral novocaine sympathetic blocks or continuous novocaine sympathetic block by an indwelling catheter. This form of therapy leaves much to be desired. Many cases are slow to respond and an occasional case is complicated by pulmonary embolism. Even of more significance is the fact that a patient who is so managed never has a normal limb again. Over a period of time the usual post-thrombo-phlebitic sequelae develop—lymphedema, varicose veins, chronic indurated cellulitis, stasis ulceration. The author questions this conservative therapy as out-moded and prefers urgent surgery in most instances of acute femoro-iliac thrombophlebitis when seen reasonably early in the onset of the disease. The surgery preferred is femoral exploration, fe-

moral thrombectomy and ligation, and regional heparinization. We have been led to adopt this program for uncomplicated acute femoro-iliac thrombophlebitis because of the favorable results we have obtained from a similar procedure in femoro-iliac thrombophlebitis complicated by pulmonary embolism.

Acute Femoro-Iliac Thrombophlebitis and Pulmonary Embolism

There remain a few physicians who would treat the patient having episodes of pulmonary embolism and presenting clinical signs in the legs with anti-coagulant therapy alone. But most of us would prefer to give the patient the added protection from further embolic episodes of combining anti-coagulant therapy and surgery. The type of surgery to be performed has been controversial. One school of thought is that the surgery must be above, rather than through, the thrombo-phlebitic process. The dictum of this school is lower vena caval ligation for any thrombophlebitic process complicated by pulmonary embolism when the process has reached the inguinal ligament level. A more popular approach has been direct surgery on the involved vein, the procedure consisting of exposing the vein in the groin, removing the thrombus with forceps or suction, and interruption and ligation of the superficial femoral vein just peripheral to the femoral profunda. Our experience with superficial femoral vein thrombectomy has been entirely satisfactory. We have incorporated in the technique regional heparinization as an additional safety factor. A plastic tube is tied in the end of the superficial femoral vein and immediate local heparinization instituted. It is our feeling that any clot that cannot be extracted by suction or by the forceps with the head of the bed markedly elevated is so adherent that it will not become detached to form an embolus. We then rely upon the regional heparinization to prevent the development of additional thrombi until healing has taken place. Continuous infusions are maintained consisting of 1000 c.c. of 5% glucose in water containing 100 mg. of heparin. We aim to infuse 2 liters in 24 hours, but regulate the rate of flow and amount of heparin so as to keep the coagulation time at about 3 times normal. The plastic catheter is removed in 72 hours. Our objections to inferior vena caval ligation are two-fold; one, that many of our patients are extremely sick and could hardly withstand the major surgical operation required for the caval ligation, and, two, the severe sequelae that frequently follow the procedure. After all, a caval ligation simply substitutes one form of ligation (a ligature) for another form of ligation (a thrombus).

Our indications for inferior vena caval ligation are quite limited:

1. Recurrence of pulmonary embolism after a bilateral superficial femoral vein ligation, or superficial femoral vein thrombectomy procedure.
2. Unsuccessful femoral vein procedure—failure to remove all clot and to obtain a good flow of blood from above.
3. Septic pelvic thrombophlebitis and pulmonary embolism.

Superficial femoral vein thrombectomy and regional heparinization in our hands has not only effectively protected the patient from further embolic episodes, but has resulted in a rapid resolution of the thrombophlebitic process and reduction in the leg swelling. The period of recovery from the thrombophlebitic process is shortened, and it has been our impression that the post-thrombophlebitic sequelae have been lessened.

Blue Phlebitis or Phlegmasia Cerulia Dolens

Occasionally ilio-femoral thrombophlebitis will be a massive affair. So great is the obstruction to venous return that arterial influx is inhibited. There is a rapid onset of marked leg swelling, the skin takes on a violaceous to blue appearance, petechial hemorrhages appear, femoral arterial pulsations become diminished and peripheral pulsations gradually disappear. If untreated, a disease initially venous becomes arterial and actual gangrene can occur. Our limited experience would indicate that decompression of the venous system by superficial femoral thrombectomy, peripherally and centrally, and regional heparinization peripherally and centrally is a satisfactory therapy for this disease. Decompression of the venous system seems to relieve the vascular spasm more than concomitant therapy with repeated or continuous para-vertebral sympathetic blocks. This is because the spasm is inherent in the walls of the involved vein and adjacent artery —a local mechanism in this disease. Should it be impossible to perform an adequate superficial femoral vein thrombectomy, the surgery in the groin should be discontinued and an immediate inferior cava ligation performed.

A current popular form of therapy for acute thrombophlebitis consists of intramuscular trypsin (parenzyme). The author has not had sufficient experience with this new drug to express an opinion. However, recent reports would indicate that intramuscular tryp-

sin is of no value in the therapy of thrombophlebitis and that it may even be harmful.

When pulmonary embolism occurs in the complete absence of any history or clinical signs of deep vein thrombophlebitis, the author prefers to rely on anticoagulant therapy. In the large precentage of such cases the source of the emboli is the right heart, and neither superficial femoral vein ligations or inferior vena caval ligations would be beneficial.

The Post-Thrombophlebitic Syndrome

An extremity that has been subject to deep vein thrombophlebitis is rarely ever normal again. Sequelate may become apparent as late as 20 years after the acute ilio-femoral thrombophlebitis. Characteristic and often gross recognizable changes are usually present. The leg remains enlarged from ankle to groin. The thigh has a peculiar "thick" feeling. The skin of the lower leg is pigmented and atrophic. Leg ulceration is commonly present. Venous hypertension, present at the outset of deep vein thrombosis, persists in the post-thrombophlebitic state. As the vein recanalizes, the venous hypertension is transmitted through the communicating veins to the surface veins and varicosities of the saphenous system develop. Venous stasis thus dominates the picture in the deep veins, communicating veins and superficial veins. Furthermore, the venous hypertension is transmitted to the venous side of the capillary loop and decreased arterial influx occurs. The resultant anoxia and the venous stasis lead to chronic malnutrition of the tissues and ready leg ulceration.

The lymphatic circulation is early involved in the post-thrombophlebitic state, the tubular lymphatics becoming obstructed by the inflammatory process in the femoral sheath. Confronted with excess edema formation as a result of venous hypertension and tissue anoxia and obstructed in the groin, the lymphatic system soon becomes decompensated. A protein rich fluid accumulates in the soft tissues of the lower leg, frequently leading to subcutaneous fibrosis and episodes of cellulitis known as lymphangiitis streptogenes. Extensive fibrosis and repeated episodes of cellulitis result in the classical end stage of the post-thrombophlebitic state, the indurated leg.

When stasis dermatitis is minimum, when there have been no episodes of lymphangiitis streptogenes, when lymphedema is insignificant, when varicosities have not developed and, in the absence of leg ulceration, when the leg swelling is entirely reversible, receding overnight, the post-thrombophlebitic limb can be treated conservatively. The main stay of the treatment is adequate support in the form of strong elastic stockings or bandages. Additional measures are described under the therapy of lymphedema, which follows.

The author prefers radical surgery for the post-thrombophlebitic syndrome. The surgery performed is composite in nature and may include a saphenous ligation and stripping, a superficial femoral vein ligation, a modified Kondoleon procedure, excision of the ulcer or of the diseased skin, extensive skin graft and sometimes an ancillary lumbar sympathectomy. We have recently followed up 60 cases having such radical treatment and are impressed with the superior results obtained. Radical surgery results in eradication of the diseased skin, of the fibrosed and indurated subcutaneous tissues, and of the contained varicosities. The incompetent communicator veins are effectively interrupted, and the reflux down the diseased femoral vein and down the varicosed saphenous vein is prevented. Leg ulceration is effectively cured. After radical surgery, the patient has a limb with normal skin resting on well vascularized normal muscle. Recurrence of leg ulceration is minimal and rare, and the slight lymphedema that persists is now readily controlled and comfortable. Again, it is well to remember that no matter how bad a post-thrombophlebitic or venous leg appears, there is a normal leg underneath at the muscle level. The most severe cases can usually be rehabilitated.

Lymphedema

Lymphedema refers to swelling due to increased fluid within the tissue spaces and the lymphatic vessels. Factors which increase the production of lymph within the tissue spaces or interfere with the drainage function of the lymphatic system result in this type of leg swelling. The classification presented in Table III is from an article of mine on "Edema and Lymphedema of the Lower Extremities," published in the Virginia Medical Monthly of July, 1952.

Classification of Lymphedema

I. Idiopathic or primary lymphedema.
II. Non-inflammatory lymphedema.
    1. Congenital lymphedema
        a. Simple
        b. Familial (Milroy's disease).
    2. Lymphedema praecox
    3. Lymphedema secondary to:
        a. Malignant disease
        b. Surgical removal of lymph nodes or lymph vessels.
        c. Pressure
        d. Roentgen and radium therapy

III. Inflammatory lymphedema
    1. Traumatic lymphedema (local tissue injury)
    2. Causalgic lymphedema (from immobility)
    3. Local inflammation (strep. and staph. infections)
    4. Recurrent lymphangitis streptogenes
    5. Post-thrombophlebitic lymphedema:
        a. From ilio-femoral thrombophlebitis
        b. From repeated episodes of local thrombophlebitis
    6. Allergic lymphedema (Trichophytosis)
    7. Filariasis.

The lymphatic circulation is in very delicate balance in normal individuals and will decompensate upon the slightest provocation. Thus, a slight trauma, a period of prolonged dependency, or even an unduly warm day may result in lymphedema. Considering the mechanics of the lymph circulation, it is remarkable that our legs are not perpetually swollen. The lymph of the lower extremities have to ascend the tubular lymphatics of the leg, pass through the many groups of lymph nodes, enter the cysterna chyle in the abdomen, transit the thoracic duct through the chest to finally enter the venous circulation at the root of the neck. Maybe man was never intended to become erect.

A case is apt to be classified as lymphedema when there is unexplained non-inflammatory simple leg swelling, when the swelling has been present since birth, when the swelling had its onset with puberty, when there is evidence of malignant disease, surgical removal of the lymph nodes or local x-ray therapy, and when there is a past history of milk leg. Inflammation in tubular lymphatics accounts for many cases. Ilio-femoral thrombophlebitis discussed above is the most common cause of inflammatory lymphedema.

The edematous leg should never be passed by lightly. Edema tends to perpetuate and even aggravate edema. A few weeks of uncontrolled edema and a process of fibroblastic proliferation has already begun so that the leg may become the chronically indurated irreversibly swollen leg. Furthermore, a persistently edematous leg is extremely susceptible to recurrent infection of the subdermal lymphatics, a condition known as lymphangitis streptogenes. So all acutely edematous legs should be treated energetically while the edema is still reversible. The edema should be controlled for many months until the swelling tendency is overcome. If the swelling disappears overnight and if the edema is entirely of the pitting variety, the case may well respond to a rigid medical program as outlined below. The essentials of conservative management are:

1. Elevation.
2. Compression.
3. Exercise.
4. Massage.
5. Restriction of salt and water
6. Vigorous diuresis.

The program is best initiated with a 48 to 72 hour period of rest in bed with the foot of the bed elevated 12 inches. During the day-time the affected limb may be raised an additional 45° by placing it on a kitchen chair inverted on the bed. The second most important feature of the treatment is adequate compression. This is most effective when applied when the leg has been completely restored to normal size by elevation and other phases of the treatment. When the tissue spaces are occupied by protein rich edema fluid high in specific gravity, no degree of compression can force the fluid into the lymphatics and up out of the leg. As a matter of fact, the fluid accumulation can even increase while adequate compression is being worn as the protein rich high specific gravity tissue fluid attracts into the tissue spaces more fluid from the blood vessels. This explains why some patients simply "can't stand" their elastic compresses. They are applying the bandage when the leg is already swollen.

When lymphedema fails to respond to a medical program, surgery has much to offer. The lymphedematous limb is similar to the venous limb in that it is normal at the muscle level. The loose areolar tissue and fat of the subcutaneous space both create and contain the abnormal fluid. We make a long incision, usually along the mesial side of the leg from ankle to knee and deepen the incision through the fascia. The flaps are then turned back and each flap pared of the water soaked fat and deep fascia. The skin is then replaced on muscle. After such a procedure, the patient may still have to wear some sort of elastic support, but the limb will swell much less and the swelling will be much more readily contained.

When the dorsum of the foot is likewise edematous, a similar principle can be applied. A rectangular skin flap is developed, based at the ankle and extending from the toes to the ankle. The flap is turned back and pared of fat and fascia and then replaced on the tendon sheath. Patients have been grateful for this procedure as it has enabled them to resume wearing normal shoes.

Summary

Radical surgery is advocated for varicose veins. All of the varicosities must be removed and all communicator veins interrupted by one means or the other. Often saphenous ligation and stripping is supplemented by direct resection of varicosities through long incisions. Wide resection of the subcutaneous tissue, the contained varicosities and the incompetent communicator veins are indicated for extensive varicose disease.

The pathological physiology of the varicosities of pregnancy is discussed. Sclerotherapy is useful and freely employed during the ante-partum period. Surgery is deferred until no further pregnancies are anticipated. Extensive varicosities in a multipara are considered an indication for sterilization.

Acute spontaneous ascending thrombophlebitis in varicose veins is treated surgically as soon as diagnosed. The saphenous is ligated and the inflamed thrombosed saphenous removed. The rationale of the procedure is discussed.

Varicose leg ulcers are treated by excision and skin grafting along with removal of the causative varicose veins. Medical management heals with a scar which readily re-ulcerates.

Phlebothrombosis is treated with anti-coagulant therapy. Eleven exceptions to this rule, indicating superficial femoral ligation, are listed. Some cases of acute ilio-femoral thrombophlebitis, when seen early, are treated surgically by superficial femoral vein thrombectomy. Superficial femoral vein thrombectomy and regional heparinization are preferred over inferior vena cava ligation for most causes of acute femoro-iliac thrombophlebitis and pulmonary embolism. The technique is described.

Radical surgery is preferred for the post-thrombophlebitic syndrome. The surgery is composite in nature and may include a saphenous ligation and stripping, a superficial femoral vein ligation, a modified Kondoleon procedure, excision of the ulcer or of the diseased skin, extensive skin graft and sometimes an ancillary lumbar sympathectomy.

The medical and surgical management of lymphedema is presented. A new operation for lymphedema of the dorsum of the foot is described.

100 Medical Arts Building.

Aspirin Box Warning.

All packages containing aspirin or other salicylate compounds should bear a clear warning, "keep out of the reach of children," according to the Committee on Toxicology of the American Medical Association. Pointing out that oil of wintergreen and aspirin are forms of salicylates most often involved in childhood poisonings, a report adopted by the committee also recommended: That the label should state "Consult your physician on dosage for children under three years of age." That individual pills be wrapped is metal or plastic foil that cannot be easily removed by children, or that the container have a top which closes automatically. That the number of tablets in each container of children's aspirin should be limited.

The committee's report, published in the July 9th American Medical Association Journal, was originated by the committee on accident prevention of the American Academy of Pediatrics. A similar report was adopted at a recent meeting of representatives of industry, medicine, and pharmacy called by the federal Food and Drug Administration.

Of 113 deaths in the United States known to have been caused by salicylate compounds in 1952, 86 occurred in children under five years of age. Forty-one of these were caused by aspirin.

Secretary of the Committee on Toxicology is Bernard E. Conley, M. Sc., Chicago. Members of the committee are Justus C. Ward, M. Sc., Washington, D. C., Jerome Trichter, New York, and Drs. Torald Sollmann, chairman, Cleveland; Jay M. Arena, Durham, N. C.; Harvey B. Haag, Richmond, Va.; Irvin Kerlan and Arnold J. Lehman, Washington, D. C., and Edward Press, New York.

A New Approach to Laryngotracheobronchitis

CHARLES PRESTON MANGUM, M.D.
Richmond, Virginia

PREDISPOSING factors to involvement of the laryngotracheo-bronchial tree include chilling of the body, breathing of cold, damp air and inhalation of solid (foreign body), liquid or gaseous agents. Invading organisms may induce the characteristic symptom — complex of laryngotracheobronchitis— any one, or all three of these organs together. This discussion does not include the specific laryngotracheitis caused by diphtheria, as that is a mechanical blocking by a membrane—and, due to early immunizations, is very rarely seen.

The so-called "virus croup" is probably the most common type seen. It usually follows an upper respiratory infection and is characterized by stridor, hoarseness and a dry cough. Except in the presence of severe respiratory obstruction over a period of days, signs of severe toxicity are lacking. There is much secretion in the larynx and trachea and, as the condition persists this becomes increasingly thick and tenacious. This produces irritation of the mucosa, causing considerable edema and obstruction.

In treatment speed is essential. The obstruction must be relieved before complications such as pneumonia, crusting of secretions, mediastinal emphysema, pneumothorax or septicæmia develop. The accepted method of relieving this obstruction is tracheotomy.

Now let's consider the pathology of this emergency. A rapid progressive course is characteristic. It consists chiefly of marked edema of the epiglottis and subglottic regions with spasm of the muscles of the vocal cords as well as edema of their mucosa. This edema may extend through the trachea downward and into the bifurcation. This is the reason tracheotomy is occasionally disappointing as to results.

In our practice here at Stuart Circle Hospital, and at times at the patient's home, we have first used a very simple and most satisfying treatment to get the patient past this distressing emergency of marked dyspnœa, mostly inspiratory in character—with cyanosis, marked indrawing of both the infra and supra-sternal spaces and at times indrawing of the intercostal spaces. The child rapidly becomes exhausted by his inspiratory efforts. He may be afebrile, but he is soon going to become comatose and develop some of the above mentioned complications unless some thing is quickly done for relief. He is held in a sitting position in the nurse's—or the parent's lap—his arms being pinioned and his head held steady by passing the nurse's arms under his arms and her hands firmly placed on each side of the head. The physician then gets the mouth open, grasps the tongue with gauze covered fingers and pulls the tongue forward. This causes the epiglottis to rise into clear view just back of the tongue. A preparation of adrenalin, 1-1000 solution, diluted with water sufficient for the age of the child, has already been prepared in a spray with a tilted tip so that the spray may be directed upon the epiglottis and down into the larynx. The spray is continued, preferably by power spray, or by hand atomized if in the home, until some relief is noted. After a very short interval of minutes the child will be breathing fairly comfortably and all cyanosis is cleared away. The patient is then placed in bed with administration of oxygen and Alevair-Fog or in a warm atmosphere of even temperature kept moist by a steam vaporizer to which may be added benzoin, menthol, eucalyptol or other pleasant volatile substances. Antibiotics are started in an effort to avoid infections, and a little later some sedative cough preparation. The spray treatment may have to be repeated if symptoms requiring it should return. In our experience here this has only had to be done in 3 or 4 patients out of over 100 in the past few years and no tracheotomies have been necessary.

May I quote one very spectacular case of an 8 year old boy brought to the hospital from Bowling Green one night. This boy was in such an extreme condition that the surgical interne had very properly prepared a tracheotomy tray. This boy was very cyanotic, exhausted, toxic and looking like a very poor risk for any surgical procedure. With the very able help of Dr. W. L. Mason he was given the spray treatment with results that amazed us. This was one of the cases that required a repeat treatment after a few hours. He made a very satisfactory recovery and went home without a tube in his throat.

This treatment has been used successfully for the post-bronchoscopic traumatic edema and also that following removal of intra-laryngeal polyps, as well

Received for publication March 3, 1955.

as for the above described conditions. The advantages are many. The patient gets out of the hospital much earlier than with tracheotomy, there is no tube cleaning necessary, and there is no extubation nor operative scar.

The simple laryngitis with inspiratory stridor and hoarseness is often relieved by vomiting—the mechanics of which is not too well understood. Perhaps the forecful projection of the stomach contents forces some of the secretion from the larynx, and also the bathing of the supraglottic region with hydrochloric acid may result in some astringent effect.

Conclusions

1. Safety and speed—faster than Alevair alone.
2. Astringent and antispasmodic.
3. More comfortable patient.
4. Less hospitalization time.
5. No surgical procedure.

1822 Monument Avenue.

Unique Epidemic.

A unique epidemic is reported in the June 25th Journal of the American Medical Association.

Four Duke University scientists described an epidemic of North American blastomycosis, a fungus disease limited to the United States and Canada. It occurred in 1953-54 in a four-mile area centering around the town of Grifton in Pitt County, N. C.

The disease, rarely diagnosed two decades ago except in a few medical centers, may occur in the Midwest, Ohio River Valley, and the southeastern United States, which are areas where some cases have occurred. The report was made in order to alert physicians and public health workers of those areas. No cause for the epidemic has been found, but the scientists hope a study of the Grifton area and population may provide a clue to the method of disease spread. Eleven cases of North American blastomycosis were admitted to Duke University Hospital within a few months. All patients lived either in Grifton or within a four-mile radius of the town. The occurrence of 11 cases within a few months in a small area can be considered as "epidemic" since it was a sudden increase in contrast with the record of 14 cases scattered over the past 16 years through the much larger area of Pitt County and seven adjacent counties.

Blastomycosis is a chronic infection marked by tumors in the skin (cutaneous blastomycosis) or by lesions under the skin and in the lungs, bones, liver, spleen, and kidneys (systemic blastomycosis). The reported outbreak was primarily of the systemic type. Common symptoms in the Grifton cases were low-grade fever, cough, discomfort, weight loss, loss of appetite, and inability to work. More severely ill patients had high fever and labored breathing. All of the patients had pulmonary disease and only one had a blastomycotic lesion of the skin.

The only patient who died of blastomycosis in this outbreak had received no specific treatment before her death. Another recovered without treatment, while the others were treated with stilbamidine, a drug restricted largely to treatment of a few fungus infections. "The results of this therapy are remarkable, since, prior to the introduction of stilbamidines, the mortality was as high as 92 per cent in patients with systemic cases followed two years or longer."

The earliest onset of the disease in the outbreak was in mid-October, 1953, and the latest in mid-March, 1954. The winter seasonal incidence is common for the systemic type.

Conducting the study were J. Graham Smith, Jr., M.D., Jerome S. Harris, M.D., Norman F. Conant, Ph.D., and David T. Smith, M.D., all of Durham, N. C.

The Lumbar Puncture

EDGAR N. WEAVER, M.D.
Roanoke, Virginia

OF ALL the tests that we have for use in the diagnosis of neurological diseases, there are probably few, if any, that are more frequently used and abused than the lumbar puncture. A carefully and correctly done lumbar puncture can give us invaluable diagnostic information, both from a negative and a positive standpoint, in many cases of undiagnosed neurological diseases. A puncture that is incorrectly done may give us much false information and may cloud the diagnostic picture to such an extent that a true diagnosis is delayed or may be missed. Should a lumbar puncture be done on a patient who has had a sudden headache and suspected of having had a spontaneous subarachnoid hemorrhage, and should this contain blood, possibly because of a difficult puncture, it may be impossible to determine whether or not the blood in the spinal fluid is due to intracranial bleeding or to trauma at the insertion of the needle. Also, a lumbar puncture done in a suspected intracranial lesion without an accurate pressure reading is almost useless. There are many similar examples in which an incorrectly done puncture may give much false information. Because of this, it is felt that anyone performing a lumbar puncture should be fully aware of the value gained by the lumbar puncture in regard to the indications, contraindications, technique, and procedure, including the dynamics and the withdrawal of the fluid for laboratory studies.

Indications

1. Dynamic, gross and laboratory studies in neurological diseases. 2. Diagnostic injections; such as, myelography with air, lipiodol, or pantopaque; and encephalography with air or oxygen. 3. As a diagnostic or therapeutic measure in either traumatic, post-operative, or spontaneous subarachnoid bleeding. 4. As a therapeutic measure for the injection of intrathecal medicines. 5. As a measure for the lowering of increased intracranial pressure in certain neurological conditions (lead encephalopathy, after removal of brain tumor, etc.). 6. For spinal anesthesia.

Although there are many uses of the lumbar puncture, as listed above, this paper is limited to a discussion of its use as an aid in the diagnosis of neurological lesions.

Received for publication April 1, 1955.

Contraindications

When an intracranial mass lesion is known to be present or suspected, a lumbar puncture should be done only in unusual circumstances, and then only in experienced hands. The possible danger of the procedure in the presence of a mass lesion in the brain is great, and unfortunate circumstances have occurred on many occasions. This procedure done in a patient with an intracranial mass lesion and increased pressure may precipitate a herniation of the uncus of the temporal lobe into the incisura of the tentorium or herniation of the cerebellar tonsils into the foramen magnum with death. Every patient who is to have a lumbar puncture should have adequate eye ground examination. If papilledema is present, then a neurological consultation should be gotten before proceeding further. It is definitely contraindicated in suspected cerebellar mass lesions.

If a patient is suspected of having a brain tumor and a lumbar puncture has to be done, it is better to do this early in the day, so, should there be any unfavorable developments, they can be more adequately taken care of during the daytime. This is also definitely true of a suspected intraspinal lesion, since patients with intraspinal lesions may suddenly become worse after a spinal puncture with development of a paresis or paralysis of the extremities.

The lumbar puncture is contraindicated in patients with head injuries who have leakage of spinal fluid or who have a bloody discharge from their ears or nose, because of basilar fractures of the middle or anterior fossa. This may cause a "backing up" of organisms into the intracranial space through a dural tear with a resulting intracranial infection.

Procedure

The actual technique of the performance of a lumbar puncture is extremely important since an inadequately or inaccurately done lumbar puncture may be misleading. The patient must be placed on a level, firm bed or table, on the side with the thighs flexed so there is a widening of the spaces between the lumbar vertebra. The head should not be flexed on the chest as this may cause a constriction of the jugular veins with increase of venous blood in the brain and resulting increase in intracranial pressure. The head should be perfectly straight and elevated on a small pillow or pad if necessary so that the

cervical spine is in perfect alignment, and on the same level, with the dorsal and lumbar spine. The needle is inserted, depending on the circumstances, in the third, fourth, or fifth interspace. The interspace between the third and fourth spinous processes can be fairly accurately localized by a line drawn from the crest of the ilium to the spine, with the patient in the prone position and with the thighs flexed. Since the conus medullaris of the spinal cord usually ends at the upper border of the second lumbar vertebra, but usually extends below this level in infants and children, it is advisable to do the puncture between the fourth and fifth lumbar interspace or between the fifth lumbar and first sacral interspace in infants and children. Punctures in the upper lumbar or dorsal area should never be attempted because of the possible injury to the spinal cord with temporary or permanent neurological damage.

After accurate positioning, the patient is prepared with a good skin antiseptic and draped. After the desired interspace is located, a few cc. of 1% novocain are injected into the skin directly in the midline between the spinous processes. There should be no significant pain associated with a lumbar puncture if it is properly done. There is no necessity for injection of a large quantity of novocain into the subcutaneous tissue as this may obscure the landmarks and does not make the procedure any more painless. The needle is inserted slowly into the interspace and a definite sensation is felt when the needle penetrates the dura. When this sensation is felt, it is relatively certain that the needle is in the subarachnoid space and should be inserted a few millimeters further so that it is well within the subarachnoid space. The stylet is removed carefully so little or no fluid is lost.

The Ayer water manometer is connected to the needle for pressure measurement. An accurate pressure measurement is extremely important and must be done by the means of a manometer. The determination of the rate of the drop of fluid from the spinal needle is of no value in regard to pressure measurement. Normal spinal fluid pressure ranges between 70 mm. of water and 200 mm. of water. A pressure above 200 should be considered elevated. In patients who are tense because of pain, there is a tendency to tighten the abdominal muscles, which causes distention of the intraspinal veins with an increase in the pressure, sometimes to abnormal heights. If the pressure is higher than normal, and is suspected of being due to tension, it is advisable to have the patient breathe in and out slowly through the mouth. This tends to cause a generalized muscular relaxation with lowering of the pressure if due to tension. Adequate time should always be given, after insertion of the needle and measuring of the pressure, for the patient to be completely relaxed.

The Queckenstedt test done by compression of both jugular veins at once, either manually or with a blood pressure cuff around the neck, is indicated only when there is a suspected intraspinal lesion and when it is necessary to determine the presence or absence of a partial or complete spinal block. No information is gained by doing a Queckenstedt test in a patient suspected of having an intracranial lesion. It is extremely dangerous in patients who have intracranial mass lesions and particularly those who have posterior fossa lesions. It is advisable to ascertain that the needle is well within the spinal canal before the Queckenstedt test is attempted, and this may be determined by pressure over the abdomen which causes distention of the intraspinal veins with increase in pressure of the fluid in the lumbar canal. However, compression of the jugular veins causes intracranial venous engorgement with elevation of intracranial pressure, and this is transmitted to the lumbar region with a rapid rise of the spinal fluid in the manometer when there is no obstruction in the spinal canal. If there is a partial obstruction in the spinal canal, there may be a slow or no rise of the fluid in the manometer. In doing the Queckenstedt test, it must be remembered that the discomfort of pressure on the jugular veins may cause the patient to strain and tighten the abdominal muscles with a quick rise and fall in the spinal fluid. A rise of the spinal fluid due to contraction of the abdominal muscles or by pressure on the abdomen does not indicate the absence of a spinal block.

The Tobey-Ayer test is done by first compressing one jugular vein and then the other and noting the respective rise of the fluid in the manometer. This procedure is of value only when there is obstruction of the lateral sinus either by thrombosis or tumor, or rarely due to occlusion of the foramen of Lushka and Magendi.

Gross and Laboratory Studies

Inspection of the fluid is important. The fluid may be clear and colorless, or it may be clear and yellow (xanthochromic), or cloudy, due to the presence of pus or blood. Xanthochromia may be due to the breakdown of a previous hemorrhage, or it may be due to lesions of the spinal cord with a partial or complete block and marked elevation of protein, (Froin syndrome). If it is cloudy, it is usually indicative of a purulent process. If the fluid

is bloody, it may be due, as mentioned previously, to either traumatic blood caused by the actual puncture, or due to a traumatic (head injury), or a spontaneous subarachnoid hemorrhage. If blood is due to a "bloody tap," the fluid will probably clear as it is removed from the needle. When the cause is questionable, it may be centrifuged, and the character of the supernatant fluid determined. If the supernatant fluid is clear, it is likely that the blood is of recent origin and probably due to a "bloody tap." It should be kept in mind that the supernatant fluid can be clear with very recent subarachnoid bleeding. If the supernatant fluid is yellowish, it is mostly likely that subarachnoid blood was present before the performance of the lumbar puncture.

The amount of fluid withdrawn is determined by the desired laboratory studies. As a rule, in the diagnosis of most neurological diseases, a routine cell count, protein, and Wassermann are ordered. In a patient with a febrile illness, and a central nervous system infection is suspected, a smear and culture should be gotten in addition to the cell count. In infections of the central nervous system, specific therapy depends largely on accurate bacteriological studies. A study of the sugar level, which may be lower in pyogenic meningitis, should be gotten in known or suspected cases of intracranial infection. The chloride level may be of diagnostic importance, if abnormally low, in patients with suspected tuberculous meningitis, but is of no other significant value. A colloidal gold test may be helpful in the diagnosis of the stages of syphilis, and may be abnormal in multiple sclerosis, encephalitis lethargica, and pyogenic meningitis. In most instances, it is useless to get all of the routine studies that the laboratory is able to do on the spinal fluid.

It is suggested that the normal values for the spinal fluid chemistries be reviewed from time to time in a good textbook. It is also advisable that normal values in the laboratory to which the spinal fluid is sent for studies be also determined, since this does vary somewhat from time to time in the same laboratory and in different laboratories.

Complications

Death may occur immediately or shortly after a lumbar puncture done on patients with increased intracranial pressure, as a result of herniation of the uncus of the temporal lobe into the incisura or herniation of the cerebellar tonsils into the foramen magnum with pressure damage of the respiratory center in the medulla.

A puncture done by unsterile technique or through an unsterile field may result in an infection in the nervous system, bone, or soft tissue.

It should always be kept in mind that paresis or paralysis of the extremities may occur in patients with intraspinal mass lesions who have a spinal puncture with removal of spinal fluid.

A less serious but annoying complication, to both the patient and physician, is that of a lumbar puncture headache which is frequently encountered soon after a lumbar puncture and tends to linger on for several days or weeks. The discomfort is usually in the suboccipital and neck region, but rarely may be frontal, bitemporal, or generalized. It is best prevented by having the patient lie flat in bed twenty-four hours after the procedure and then limiting activities for several days. When it does occur, it is best to avoid analgesics as much as possible, since it is almost entirely relieved, in most individuals, by lying down. Some patients will have headache after lying down in spite of all medication.

Summary

The indications, contraindications, procedure, and technique of a lumbar puncture have been briefly outlined. The lumbar puncture must always be remembered as a delicate procedure which may give valuable information in neurological diagnosis, and, on the other hand, may give much misleading information. It must always be remembered that the lumbar puncture is potentially a hazardous procedure.

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

The Training Program at the Lynchburg Training School and Hospital

It is interesting to know that some forty years ago, the administrators of the Lynchburg State Colony, under the leadership of Dr. A. S. Priddy, felt the need of an education and training program for many of the institution's 500 residents. As a result of their plans and efforts, the Lesner-Fletcher Hall was completed November 1, 1914, as an educational, recreational and religious center. This was an imposing building, with ample facilities at the time. Its auditorium seated 350 and there was ample space in the classrooms. The school started classes in Industrial Training for boys. Class activities included such things as making mattresses, brooms, chairs and other small household articles.

By 1920, the school was operating on a year 'round basis. Class activities had been expanded to include sewing for girls, reading, writing and arithmetic. Swings and slides had been added to the playground, but only after much effort was made to obtain the necessary appropriations.

The problem of overcrowding was beginning to show itself and the administrators realized that an adequate education and training program would help speed up the movement of residents through the institution. As a consequence, the training program was planned to include as many as possible. The ward program was expanded to include weaving, knitting and fancy sewing, in addition to training in routine household tasks.

The school had added Beauty Shop and Domestic Science Training to its program. Facilities were also provided for the manufacture of dresses, overalls and shirts. Many of the residents enjoyed the benefits of training and occupational therapy by working on the farms and gardens, in the carpenter shop and in various other maintenance departments throughout the institution.

Despite this rehabilitation program, overcrowding continued, and by 1943 the school's facilities for training had become inadequate. The population of the institution had risen to 1,650. For several years, the greatest need for the institution was expressed in terms of a school building. Through the efforts of the Superintendent, Dr. G. B. Arnold and others, an initial appropriation for $200,000.00 was secured for the expansion and improvement of the educational program. Plans for a new school were made, but construction was not started until after World War II. Additional appropriations were necessary for the school's construction and the building was ready for use in February 1953.

A short time prior to the completion of the school, Dr. W. I. Prichard was made Superintendent of the Lynchburg State Colony. He was formerly the Superintendent of Petersburg State Colony, and had established an effective training program at this institution. Upon arrival at Lynchburg, Dr. Pritchard surveyed the new school's facilities and planned for its immediate use in the general expansion of the education and training program throughout the institution. By this time, the institutions population had grown to 2,218.

By way of description, the new school building is a two story brick structure. It houses an auditorium with a comfortable seating capacity of 750. It contains ten academic classrooms, a completely furnished four-room apartment, with bath and sewing room for use by the Home Economics Department in the study of homemaking. On the ground floor it contains a completely equipped beauty shop, two large handcraft rooms and a gymnasium with a seating capacity of 300.

Dr. Prichard secured Mr. Howard S. Holmes as Director of the Training Program. Mr. Holmes has had many years of experience in the public school system of Petersburg as well as experience at the Petersburg State Colony. Upon arrival, Mr. Holmes took immediate steps to set up a comprehensive program and to secure a qualified staff to implement the program.

By September 1953, he secured three supervisors and seventeen teachers for the fall term. The school was planned to contain three departments: Academic, Vocational-Industrial Arts, Physical Education and Recreation. Throughout the summer months, classes had been regrouped and many new children

Article prepared by HOWARD S. HOLMES, *Principal and* CHARLES O. WILLS, *Assistant Principal, Minor H. Davis Training School, Lynchburg Training School and Hospital, Colony, Virginia.*

entered the school program for the first time. The screening results revealed that it was necessary to have the following academic classes for the 1953-54 term: Nursery, Sense and Social Development, Pre-Primary, Intermediate, and Adult Academic. The Vocational Department offered Shoe Repair, Beauty Shop and Home Economics for boys and girls. The Physical Education Department offered a complete program of physical education and recreation, as well as a hobby shop and game rooms for leisure time activities.

The school day was divided in five periods of 55 minutes each, with a five minute period between each class for the purpose of changing classes. Classes contain boys and girls and average in size from 10 to 15 pupils per teacher, per period. We found, with the help of the teacher and pupils, it wasn't too long before the child got his schedule straight and was getting to class on time. Our first year passed rather rapidly and all of the teachers felt that the year was one of great interest, challenge and learning for all concerned. Most of us had never worked with children who are classified as mental defectives. At the end of the first year, we did not make any formal study to evaluate our program, other than administering diagnostic achievement tests, which showed that many of the children had bettered their scores on the retest than they had made at the beginning of the year. The anecdotal records also showed that many children had shown improvement in their class work, in their attitudes toward school, and toward their teachers and classmates. There has been an overall improvement in their social, emotional and physical growth.

Since our faculty has had very little training in the field of special education, we have worked out, with the help of the Unversity of Virginia Extension Division, a series of workshop courses, which will be offered each summer as basic courses in this field. Teachers and administrators take this opportunity to reflect on past problems as well as search for the best method of approaching new problems.

In spite of the teacher shortage, we have been able to add nine new members to our faculty. This has



Fig. 1. The residents of the training school enjoying an exhibition of the "Centerpede Walk" at a recent physical education program.



Fig. 2. Participants working on racers for the Lynchburg soap box derby contest.



Fig. 3. The training school audience enjoying a style show program.



Fig. 4. An academic class scene at the H. Minor Davis Training School.

enabled us to start classes in Music, Woodworking for boys, Handcraft and Weaving for boys and girls, on-the-job training classes, a ward recreational leader and another academic class. We are especially happy about the educational background of our group because nineteen of our teachers have Collegiate Professional Certificates. In addition to this, four other members of our faculty have Masters of Education Degrees. The other members of our group are specialists in their field and have had years of practical experience in the areas in which they are teaching.

In addition to our regular curriculum throughout the 1954-55 term, we would like to mention the highlights of what our training program included. We run a summer day camp, which includes some 1,100 residents during the month of August. There are classes in table manners in which every child in school eats his noon meal at least twice per month in the school dining room. These children enjoy the meals that have been planned, prepared, cooked and served by the Home Economics classes. The June Field Day, which involves 250 school boys and girls, is becoming an annual event. We are taking part in various community activities such as sponsoring a training school soft ball team, taking part in the annual Amherst County Day program at Sweet Briar, participation in the Regional Scoutorama and supplying entrees in the Lynchburg Soap Box Derby contest.

As this term closes we have been able to see further improvements in our boys and girls. Since this type of obesrvation is subjective in nature, we have sought the aid of our psychology department to evaluate more objectively the worthwhileness of our training program. We have referred a number of students for retesting to find whether there has been improvement. Some of the cases have shown a slight improvement; others, a moderate improvement; and others, a marked improvement. By way of illustration, we would like to present two cases:

Case No. 1. The previous testing on V. G. from the time this patient was ten years of age until 1953 shows I.Q.'s on the Benet and Weschler falling in the low 50's. Weschler tests given at three intervals show the following scores:

June 2, 1953		June 2, 1954		Feb. 26, 1955	
Weschler Form—1;		Weschler Form—2;		Weschler Form—1;	
C.A.—20-5		C. A.—21-5		C. A.—22-1	
Verbal I.Q.	—62	Verbal I.Q.	—84	Verbal I.Q.	—82
Performance I.Q.	—61	Performance I.Q.	—78	Performance I.Q.	—102
Full Scale I.Q.	—58	Full Scale I.Q.	—80	Full Scale I.Q.	—91

We feel that since there was nothing in this pupils environment which has been changed except that she has spent a little more than a year and a half in school under what seems to have been the guidance of excellent teachers, the native capacity of this pupil has obviously been present throughout her life. It is difficult to estimate what the eventual outcome will be with remedial education now being employed.

Case No. 2. R. K. was committed to the Colony when he was nine years of age. Results obtained in 1941 showed R. K. to be operating in the moron range with an I.Q. of 68 on the Stanford Binet, Form L. A retest at life age 12-8 showed R. K. to have slipped somewhat and to have an I.Q. of 51. R. K. obtained an I.Q. at life age 14-11 of 61 on the Stanford Binet, Form M. More recent test data on R. K. are as follows:

Weschler Form—2;		Weschler Form—2;	
C.A.—16-11		C.A.—21-10	
Verbal I.Q.	—71	Verbal I.Q.	—77
Performance I.Q.	—77	Performance I.Q.	—99
Full Scale I.Q.	—70	Full Scale I.Q.	—86

It is obvious from previous testing that this boy has operated in the moron defective level. Here once again we see an indication that this patient is of average or better intelligence and that continued environmental stimulation and remedial education may result in this boy actually operating at the above average level, although his previous test scores indicate him to be defective.

This boy has completed our Home Economics course in Cooking and Baking, and has been working in a restaurant in Lynchburg.

The Psychology Department reports that there are other boys and girls whose test scores are improving. As we complete our second year in the expanded program, we are planning to do a much more extensive retesting program so that we may better evaluate our procedures and can plan for any necessary changes.

We feel safe in saying that throughout the whole institution all the employees are trying to provide a healthy atmosphere which is conducive to good living and learning.

In terms of the school's program we feel that each

student should be helped to develop his capabilities and to improve his disabilities to their fullest extent. We are designing a training program which will help the child to develop a more balanced personality.

We are arranging a curricula to meet the needs and developmental stages of the educatable and trainable child. We hope that this type of planning will help the individual to function better in his present environment as well as being better prepared to meet his future problems in a more satisfactory manner, whether he resides in the institution or in an outside community.

Even in the short period of two years, we are facing several problems concerning our trainees. These center around an enlargement of our job placement and guidance programs.

As the students training program nears an end, we find it necessary to explore more job placement possibilities.

We must extend our public relations program so that community agencies and potential employers will better understand our education and rehabilitation program.

We must meet the need for a more adequate counseling service for our placees in the recreational, social and vocational areas.

We must institute some sort of means which will provide for a more gradual adjustment from institutional living to community living.

These are but a few of the major problems with which we are faced as our training program progresses.

Throughout our whole training program, we recognize the importance of successful achievement, recognition and belongingness in our daily contacts with our boys and girls. We are attempting to provide as many meaningful and purposeful experiences as possible. We are recognizing individual differences between children as well as within the individual, by providing work suitable to these abilities and needs. By the use of these and other means we are attempting to develop an educational and training program which will help the child become more socially, educationally and personally adequate so that many of our boys and girls can re-enter society to live a more happy and satisfying life.

Leukemic Twins.

Two Minneapolis physicians have urged their colleagues to report cases of leukemia, a serious blood disease, when it occurs among twins, since evidence about hereditary factors in the disease is scarce. They estimated that over a 10-year period there would be no more than about 450 cases of leukemia among twins in this country. The chances of leukemia occurring in each of a set of identical twins appears to be about one in 2,000. Reports showing the exact incidence of the disease among twins could help to establish whether heredity is a prime factor, a secondary factor, or of no importance in the development of the disease.

The discussion by Drs. Ray C. Anderson and Harold W. Hermann appeared in the June 25th Journal of the American Medical Association.

They reported on two sets of identical twins in which three of the children were fatally stricken by the presently incurable disease. One twin girl was fatally stricken by the disease but the other still appeared healthy several years later. In the other set each twin was stricken. These reports were like others made previously since they yielded no evidence whether a second twin is likely to suffer the disease after one twin is stricken. It would be helpful if all information about leukemic twins could be reported to centers involved in leukemia research.

Medico-Legal Notes . . . .

Irresistible Impulse

It would seem harsh to hold a man accountable for doing that which he could not refrain from doing. And for this reason, in about a dozen states, "irresistible impulse" is a sound defense to crime. The nature and degree of this impulse varies from state to state. In some jurisdictions—Virginia is one of them—the "irresistible impulse" has to be the product of an insane mind before the defendant can count on it to exculpate him. In other places a neurotic kind of impulse will protect the defendant.

Actually there are three kinds of impulses: psychotic, neurotic, and if you choose, "normal". The psychotically irresistible impulse is an overwhelming urge to do something which develops in the mind of an insane person. It is an impulse that will not be denied and the psychotic person will yield to it no matter whom it hurts. Thus, a schizophrenic who is powerfully motivated to assault some one will do so even in the presence of a whole battalion of policemen. For he does not reason by the normal calculus of punishment and effect. Theoretically, in most states, the insane person is guilty if he knew he was doing wrong. In most states the yardstick is: did he know that he was doing something wrong. And if he did, then he is accountable for his actions no matter how desperate the impulse to do the wrong. But in practice, a grand jury is unlikely to indict, a persecutor unlikely to push, a petit jury unlikely to convict, a judge unlikely to sentence an obviously insane person who was impelled by irresistible forces within him to commit the act. The law here is ambiguous. On the one hand, mere knowledge that the act was evil is enough to vest the accused with full accountability. On the other hand, no crime is committed unless a defendant wills to do something wrong. It is hard to say that an insane person whose reason has been dethroned and whose free agency has been destroyed by the fabric of his psychosis wills to do wrong.

So irresistible impulse is not a highly controversial matter with respect to insane persons in the grip of such impulses. When it comes to neurotic impulse, the matter is different.

There are two kinds of neurotic impulses. One is typified by compulsive hand-washing or door-knob counting; by the neurotic who cannot pass without counting every crack in the sidewalk or every picket on a fence. The other is typified by stealing or fire-setting. In both cases we have a psychoneurotic (*not* an insane) urge to commit a foolish act for no "rational" purpose. The first act (the compulsive hand-washing or window-counting for example) is a ritual designed to protect the patient from guilt feelings. The second act (pyromania or kleptomania for instance) is the acting-out of a powerful "anti-social" urge. In each case, the neurotic feels that he *has to* perform the act; in each case he does not *want* to do it; in each case he suffers serious anxiety if he fails to do the act.

The first kind of neurotic impulse cannot lead to criminal behavior. Its very purpose is to neutralize guilt feelings, so of necessity it is a non-criminal act. The second kind of neurotic impulse is a tougher medico-legal problem. What shall we say of the kleptomaniac? He does not want to steal; he does not need to steal. He has no use for his loot. Yet he must steal or suffer the pangs of almost overwhelming anxiety. And even more serious, what of the fire-bug, the strange person who must set fires. Not because he collects insurance money; not because he hurts an enemy or conceals evidence, but simply and solely because there is within him a not-to-be denied neurotic urge to set the fire as a symbol of a powerful unconscious impulse.

Many psychiatrists argue that such a person must be excused from guilt, since he does not really "will" the harm. They argue that it is irrational to punish a man for doing what he cannot help doing. But other authorities dismiss this and take the following position: the pyromaniac, or the kleptomaniac, *can* refrain from setting the fire or taking the loot. For instance, a pyromaniac is about to strike the match when a policeman strolls by. What happens? He does not set the fire. If he continues to remain under observation, what then happens? He never sets the fire. To be sure he gets sick. He suffers from palpitations, or sweats, or anxiety, perhaps he faints or vomits.

Thus there is no doubt about the genuineness of the impulse. It is not malingered. It is not a

Contributed by HENRY A. DAVIDSON, M.D., *Assistant Superintendent, Essex County Hospital, Cedar Grove, N. J. and Instructor in Legal Medicine, Medical College of Virginia. Dr. Davidson is author of the standard text,* Forensic Psychiatry (*Ronald Press, New York 1953*)

cover-up for an arson. It is genuine illness. But the fact remains that the defendant *can* resist. And so it may be said very simply that an impulse which can be resisted in the presence of a policeman is not irresistible. Thus, logically viewed, the defense of irresistible impulse would seem to be inappropriate here.

There is also the third category—the impulsive rage reaction that sometimes arises within you or me. You may have felt like choking the partner who trumped your ace, or breaking your golf clubs over your knees, or letting forth a river of verbal abuse at the driver of the car who forced you to the curb. These are all rage reactions in presumably normal people. Sometimes they seem irresistible, and many of us are briefly blinded by such rage that for a split-second we feel like killing or kicking or screaming, and then it passes. But surely we must be held accountable for such acts. Otherwise we but give a license to the poorly restrained man and hold fully accountable the more self-controlled citizen.

The so-called "insanity defense" is often legitimate, but sometimes it is a desperate rear-guard action fought by an attorney who feels that the imperatives of advocacy require him to use every possible weapon. And when "insanity" cannot be established there is a temptation to fall back still further and, in the dozen states that allow it, to plead that the defendant was the hopeless pawn of an overwhelming impulse. Sometimes indeed this is quite true, and then society must detain such an offender lest a recurrence of this wild impulse yield to still worse crimes. But often the impulse is unresisted rather than irresistible. In the last analysis we must each be accountable for doing what we know is wrong.

Blind Rehabilitation.

Newly blinded veterans and servicemen are learning to walk, work, and play again under the leadership of a man just as blind as they. Serving as a constant example of success and adjustment to the newly blinded men at the VA hospital, Hines, Ill., is Russell C. Williams, B.S., himself a blinded veteran. He is chief of the blind rehabilitation section at Hines.

Williams and Dr. Maxwell D. Flank, chief of the physical medicine and rehabilitation service at the VA hospital, outline the program of the centralized blind rehabilitation section in the July 9th American Medical Association Journal.

Assisting Williams are specially trained sighted therapists who work "seven days a week, 24 hours a day" on an individual basis with the patients. The program participated in by the patients, who come from throughout the United States, is not vocational training but a way of making the emotional and physicial change needed for "a fresh launching into society." Underlying all the activities is the aim of showing blinded men that they can adjust and succeed in everyday life.

The activities begin with simple projects and progress to harder ones. This is called establishing a "success pattern." As patients conquer each new situation, they move to the next, always gaining confidence in their ability to succeed. Each patient progresses at his own rate under the supervision of his own therapist. In the shop unit, patients begin with leather work, move to weaving, then to the use of hand tools and, finally, to power equipment.

The men are taught to walk with a cane in simple situations in the hospital. The "expected rather than the unusual goal" of this phase is a variety of trips through the congested Loop area of Chicago.

Patients are encouraged but not required to participate in recreational activities, such as swimming, golf, bowling, dancing, and card-playing. They are designed to show the patient that he can participate in group activities with success. Typewriting, which does not require sight, is taught to all patients along with braille and blind handwriting methods.

Throughout the program, patients and therapists are evaluating, measuring, and analyzing the patient's successes and failures. A clinical psychologist helps the patient in understanding his individual problems—but the emphasis is on the most activity and the least talk.

Length of stay at the hospital varies, depending on the patient's individual responses. Maximum length is usually 18 weeks. Of the 249 patients treated before December 1954, 209 were significantly benefited. The other 40 remained only a short time.

The section, the only one of its kind in the country, can handle 27 patients at one time.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Anthrax in Man

Anthrax is a disease that has been found throughout the world but today is not classified as a common disease. The source of infection in man is the tissue of animals dying of anthrax or contaminated hair, wool and hides. The reservoir is in cattle, sheep, goats, horses and other animals. A history of possible exposure is of great aid to the physician because consideration in differential diagnosis might be otherwise overlooked on account of infrequency.

Infection of the skin is the usual type encountered and occurs from contact with infected hair, wool, hides, contaminated shaving brushes and other manufactured products, or by direct contact with infected tissues. A primary anthrax pneumonia may result from inhalation of spores. Gastro-intestinal anthrax results from ingestion of heavily contaminated meat. The incubation period is rapid, within seven days and usually less than four. It is rarely, if ever, transmitted from man to man but the discharges from lesions are infective. Contaminated articles and soil may remain infective for years as the result of rapid spore formation on exposure to oxygen. In man it occurs infrequently and sporadically and primarily as an occupational hazard among veterinarians and agricultural workers handling animals and industrial workers processing hair, hides and wool.

The cutaneous lesion develops as a small red macule which enlarges. In two or three days edema is present and a vesicle with clear fluid forms in the center of the macule. This is followed by the formation of satelite vesicles. Necrosis develops and the lesion presents a bluish-red or black eschar. It is not painful but the regional lymph nodes which become enlarged by lymphatic spread from the carbuncle are painful. General symptoms are malaise, fever and general prostration which are in keeping with the severity of the infection.

Since anthrax-like bacilli occur on the skin, the detection of the organism should be done by inoculating mice with material from the lesion, blood or tissues. The growth on blood agar plates, inoculated from the mice which have died, differentiates the anthrax organisms from the non-pathogenic spore-forming aerobes.

Anthrax is not a highly contagious disease among human beings and secondary cases are rare. Fewer than a hundred cases a year develop in the United States. During the early spring two cases were reported in Virginia among employees of a plant handling imported raw wool. In neither instance did a secondary case result. The organisms were identified through mouse inoculations and an effort was made to recover anthrax bacilli from samples of wool collected in the plant. This proved unsuccessful. It should be noted that this plant has been operating in Virginia for seven years and these are the first cases that have developed. The employers are to be congratulated on the safety instructions they give their employees, the promptness with which the two cases were diagnosed, and the efficiency with which they put into operation suggestions for the prevention of the development of additional cases.

Untreated cases of cutaneous anthrax have a fatality rate of about 20%. The other two forms are highly fatal. It is fortunate that the infection responds to treatment with antibiotics. Penicillin was first used. Clinical response to aureomycin has been a little more rapid than to penicillin. The tetracycline antibiotics are also used and the response to terramycin has been comparable to the results obtained with aureomycin. It should be borne in mind that discharges from lesions and articles soiled therewith contain spores and that the spores require steam sterilization under pressure or boiling.

International measures for the prevention of the spread of anthrax include sterilization of bone meal before use as animal feed, sterilization of hair for use in shaving brushes, regulation of processing of imported hair, wool and hides to minimize the hazard to man.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	June 1955	June 1954	Jan.-June 1955	Jan.-June 1954
Brucellosis	5	3	15	18
Diphtheria	2	1	14	25
Infectious Hepatitis	58	182	746	2600
Measles	669	2891	3315	22046
Meningococcal Infections	7	8	59	69
Poliomyelitis	13	13	36	37
Rocky Mt. Spotted Fever	7	5	16	12
Streptococcal Infections	296	283	4451	3045
Tularemia	1	3	7	21
Typhoid Fever	1	7	18	28
Rabies (In Animals)	19	17	231	225

Woman's Auxiliary....

President—Mrs. Maynard Emlaw, Richmond
President-Elect—Mrs. Mervin W. Glover, Arlington
Recording Secretary—Mrs. J. W. Carney, Newport News
Corresponding Secretary
Mrs. Levi W. Hulley, Jr., Richmond
Treasurer—Mrs. William C. Barr, Richmond
Publication Chairman—Mrs. Wm. S. Grizzard, Petersburg

Tazewell.

Mrs. David M. Wayne, Bluefield, is President of our newest auxiliary, the Woman's Auxiliary to the Tazewell County Medical Society, organized June 16th at Clay Pool Hill, Richlands. Other officers are: Mrs. Rufus Brittain, Tazewell, President-Elect; Mrs. C. C. Bowen, Richlands, Secretary-Treasurer, and Mrs. W. J. Berry, Richland, Corresponding Secretary.

The officers were installed by Mrs. Maynard R. Emlaw, State President, at an organization meeting which followed a dinner meeting of the doctors and their wives. Mrs. Joe A. Robinson, Richlands, acted as Temporary Chairman, under the direction of Mrs. M. W. Glover, President-Elect and State Organization Chairman.

The next meeting of the Auxiliary will be held at the Tazewell Country Club in August. Tazewell County Auxiliary is the seventeenth to be organized in the State. Delegates from the Auxiliary are planning to attend the State Convention in Richmond, October 16-19.

The Arlington County Auxiliary

Was winner of a first prize in the Today's Health 1954-55 Woman's Auxiliary subscription contest. They received a cash award of $40.00.

Wise.

This auxiliary met at the Colonial Hotel in Wise on June 8th, with the president, Mrs. C. H. Henderson, presiding. Mrs. D. B. Jones, state chairman of the American Medical Education Foundation, reported on plans of fund raising. Mrs. C. L. Harshbarger, chairman of the Hospital Garden Club, asked for volunteers for the month.

Appropriate means for the raising of funds to support studies of two student nurses had been previously discussed, and it was decided to hold a bake sale in the Hotel Norton on July 2nd to further this aim. Mrs. C. H. Henderson and Mrs. J. H. Dellinger served as chairman and co-chairman.

I. V. Bene (Mrs. Eugene)
Chairman of Publication

AMA Surveys County Medical Societies

To find out what county medical societies throughout the country are doing and to help them develop new public service programs, the AMA's Council on Medical Service currently is distributing questionnaires to officers of the 1,911 county and district medical societies in the U.S. The most complete of its type ever undertaken, this survey covers all major areas of society interest—including meetings, committees, programs and activities, insurance programs, dues, office facilities, and personnel. Since this is the only way that the Association can keep abreast of society activities, the Council hopes that all questionnaires will be returned as soon as possible. The information gleaned from these reports will be invaluable aids to societies seeking assistance in expanding their activities and will help the Council's staff increase its ability to be of service to society officers and members. This year's survey is being conducted in cooperation with the Department of Public Relations.

President's Message . . . .

Medical Societies

DOCTORS are really "joiners". They not only are members of local or county societies and through them of state societies and the A. M. A., but they have numerous hospital staff organizations, regional groups, specialty societies, numerous colleges, innumerable groups for special diseases such as for the hard of hearing, for poor vision, for degenerating muscles, for weak hearts, for cure of mental disease and its prevention, for cure of alcoholism, for undernourished children, for superannuated adults and onward almost without end.

During recent years we have developed boards for certification in many fields and they continue to grow in number and authority, but there is no authority over them. Many of them are terribly arbitrary in their demands and they overlap each other to such an extent that disputes are inevitable and no one can decide where lines should be drawn.

We should settle down and decide where our real loyalties lie so that we can support adequately the important organizations and keep the lesser ones in their place, because regardless of one's strength when it is spread too thin, it amounts to very little.

I am sure that our first loyalty lies in the primary organization of local society, state society and the A. M. A. When we have adequately done our duty to these we can spread out to the others with much benefit to ourselves and to the other groups.

An important development in recent years is the Student American Medical Association. This group is growing in strength and deserves the support of all of us. Through it the medical student learns much of medical organization. When he graduates he finds that he can join local societies, state societies, and the A. M. A. without dues until he is established in practice. We should encourage these young men to follow this course because it will train them in the line of strength of medical organization. They will thereby be inoculated with medical needs in general as contrasted to the demands of special groups. They will profit not only in scientific knowledge but they will mature in medical statesmanship and not be the victims of so many special groups.

The young medical man today should become an active member of organized medicine at the earliest opportunity. He should realize that in these organizations he will meet all of his colleagues, he will learn the important problems and participate in their solutions, he will broaden his perspective and learn the difference between essentials and non-essentials, and as he matures he will direct the policies of our fine profession in the way they should go and thereby avoid many pitfalls which have handicapped us in the past.

Carrington Williams

President

Editorial....

The Importance of Professional Education in the Eradication of Tuberculosis

I KNOW of no better way to learn about a subject and to consider its importance and its dimensions than to accept an assignment to speak about it. There was perhaps this ulterior motive in calling upon me to appreciate, and to share with you my appreciation of, the importance of professional education in the eradication of tuberculosis.

We are not alone, let me assure you, in bringing forward this important aspect of so many health problems in which the community and the profession are working closely together. Only in the last six months all the medical schools in the country have received questionnaires asking about what they are teaching, how many hours, in what years, and in what form—in the fields of allergy, industrial medicine, occupational medicine, mental hygiene, biophysics, environmental medicine, cancer, medical ethics, medical economics, radioactive isotopes, biostatistics, first aid, and civil defense.

It has, however, become apparent to many of us that effectiveness in teaching in the whole field of medical education cannot be expressed satisfactorily in terms of hours of lectures by subject, but rather is measured in the presentation of fundamentals and the expression of attitudes.

Tuberculosis is a disease of the whole man. It is true that we speak of pulmonary tuberculosis, of tuberculosis of the bone, of the kidneys, and of various organs and structures of the body, but it is fundamentally a systemic disease with a long-term life history and indeed a cultural component which complicates its eradication. It has a long history in our culture, full of folklore and fear in its origins, and I am tempted to say it retains today an undue component of fear and folklore which we would do well to destroy. It is a disease which lends itself rather dramatically to illustrative examples of most of the major facets of the present body of medical knowledge.

Something is known of its etiology, of its transmission and epidemiology; something is known of the variety of its manifestations in the untreated course of the attack of the invader upon the host. Among these manifestations are a multitude of diagnostic phenomena and the young student in medicine can frequently observe more, palpate more, percuss more, and hear more through his physical examination of a patient with tuberculosis than with almost any other disease. Something is known of the responses of these microorganisms to antibiotic therapy and of the responses of the hosts to the miracles of surgery developed in the past few years. Hospital stays have been shortened, mortality has been decreased, effective recoveries have been far greater than ever before, and physical medicine and rehabilitation have contributed immeasurably to this field. One might almost imagine an entire curriculum in the fields of health education around the story of tuberculosis.

Perhaps the most important educational experience this disease serves to emphasize is the fundamental importance of treating the whole patient—his mental, physical, and family well-being—if, in the light of present knowledge, we are to achieve what *can* be achieved toward its eradication. Lacking knowledge of a specific medication absolutely effective against the tubercle bacillus, and effective against both the destructive and constructive reactions the human body sets up to this invader, our approach to the problem must remain largely patient-centered and community-centered rather than disease-centered: *patient-centered* in the sense that the human being with tuberculosis is likely to have a long-term illness with its attendant worries of costs, of a certain amount of ostracism and segregation, and frequently attendant upon a lot of

misinformation in own mind about "TB": *community-centered* in the sense that the most effective approach we now have rests in a widespread effort to identify cases and contacts, and thereby to cut down the disease by cutting down its spread.

Here are some discouraging statistics in contrast to the promising ones cited a few moments ago. There are about 100,000 new cases of tuberculosis reported every year, of which approximately 80% are described as active or probably active, and the prevalence of the disease has been estimated at approximately 1,200,000 in the United States, of which one-third are active cases. But the *really* shocking aspect of this estimate just cited is the high proportion of it based upon information *first* reported in certificates of death! The April 22 V.T.A. Bulletin points this up right here in our own state. "*The Most Recent Final Statistics* available (1953) list 528 Virginians dead of tuberculosis—262 white and 266 Negro. Two hundred and thirteen of these were *not reported* before they died. In other words, only their death certificates show that they lived and moved among us, infecting no one knows how many men, women and children with tuberculosis.

"*A Startling Fact* is that of the 528 Virginians who died of tuberculosis, only 78 died in TB hospitals . . . *450 died outside* of tuberculosis hospitals. Why?"

Tuberculosis associations, local, statewide, and national, have done an extraordinarily effective job in informing themselves and the population about some of these facts concerning the disease. Some of them, including our chapter here, have appreciated that in the field of professional education special help is needed. You have supported the graduate training of medical social workers and contributed to the cost of training programs in the fields of tuberculosis rehabilitation and tuberculosis nursing. The new program of the American Trudeau Society has set as its principal goal "an inspiring teacher, well trained in pulmonary diseases, in every medical school in the United States". This is a very modest goal.

We live in an age of miracles, predictable miracles in a sense; and if at this stage in the field of tuberculosis we could accomplish one thing, more important than any other in achieving such results, it would be to kill the fear professional people themselves have in the care of patients with this diagnosis. This must be said in the strongest possible terms today, for our nursing recruitment, our social workers' interest, even our professional energy in this field, are restrained by an outmoded, outdated, outworn, and now unsupportable fear of TB. Under modern hygienic hospital conditions, and with personal precautions easily understood and adopted, the care of these patients is not a significantly greater risk than the care of other patients, and this fact must be appreciated if we are to do the job which lies ahead.

There are several dimensions to this problem of fear. I have already alluded to the historical factor, with particular reference to tuberculosis. There are possibly two other elements to which we in the professions and in the voluntary health fields have actually contributed. These are difficult to discuss, even a little difficult to define.

The progress of medicine has been startling in the past few decades. All of us can recall announcements of great hope followed by periods of discouragement, as cures and promises of cures appear in the press and then prove less than first anticipated. There is an atmosphere of drama, of emotional involvement, in the heart and soul of every family in which there is a case of cancer, multiple sclerosis, crippling arthritis, muscular dystrophy—when some item creeps into the press about a cure or a prospect of a cure. It matters not how carefully conditional such announcements are made; it matters not that the investigators themselves are almost universally cautious in the evaluation of their results; it is just simply a part of the world in which we live that millions of people are aware that medical miracles are possible, and pray God that this one will mean life or health to themselves or to ones they love.

Now the diseases mentioned above have in the last ten years become household words in the United States, and the reason they have become household words is because

active, dedicated community groups such as yourselves have united in an effort to support science in their eradication. A major effort of all of these groups—indeed a very vital effort—has been the raising of funds and the appeals made to raise funds have occasionally, but unblushingly, been based on fear.

In tuberculosis the problem is even further confounded by the fact that the most effective approach now to the eradication of the disease is through case-finding. Mass x-rays are one of the case-finding methods. You may have tuberculosis and not know it! You may be a contact case, and not be aware of it! We are caught in this quandary. Persuasion up to this point of getting periodic chest plates, but short of unreasoning fear of the disease itself!

I have emphasized this factor of fear because it might be a major stumbling block in the establishment here and elsewhere of programs capable of fulfilling the scientific, the sociological, and the human promises of the conquest of tuberculosis in a few years rather than an undefined ultimate future. We will, with the help of you and others, increase our teaching staff, our skilled workers, our graduates in medicine, nursing, dietetics, social work, physical and occupational therapy, and in the graduate medical and surgical specialties to comprehend what is known in tuberculosis and to stimulate them to the necessary research and to the necessary understanding of the community components of the problem. We plan an attack emphasizing the importance of professional education in the eradication of tuberculosis. Undergraduate students in these areas will be exposed to all aspects of this attack. We will sponsor research; we will establish fellowships; we will work closely with both governmental and volunteer health agencies. We believe that the State of Virginia will be in a position soon to take national leadership second to none in the eradication of this dread disease.

JOHN B. TRUSLOW, M.D.

EDITOR'S NOTE: This address was delivered to the Richmond Tuberculosis Association, May 5, 1955.

Society Proceedings . . . .

The Arlington County Medical Society

Held its annual dinner-dance on June 16th.

An oil portrait of Dr. W. C. Welburn was presented to the Society and received by Dr. H. C. Bates, president, who stated the portrait will hang in the lobby of the Arlington Hospital, pending erection of society quarters. The portrait was presented by Dr. J. R. B. Hutchinson who was president in 1954 and in whose administration work on the portrait was begun.

Another highlight of this meeting was the presentation of the second annual Welburn Award. This was made to Gilbert L. Hall for his outstanding service to medicine in Northern Virginia. He is president emeritus of the Board of Trustees of the Arlington Hospital and is credited with conceiving the idea for Arlington's Community Hospital.

Fairfax County Medical Society.

At a special meeting of the executive committee of this Society, Mrs. John Peirano, Fairfax, was appointed executive secretary.

Final meeting of the season was held on June 9th at Walnut Hill Lodge, Arnold Estate. Pat Jones, director of public relations for the Curtis Publishing Company, gave an address on public relations.

The Society's first fall meeting will be held on September 13th.

News . . . .

Calendar of Coming Events

American Congress of Physical Medicine and Rehabilitation—Hotel Statler Detroit, Michigan, August 28-September 2.

The Medical Society of Virginia—Hotel Jefferson, Richmond, Virginia, October 16-19.

Southern Medical Association—Houston, Texas, November 14-17.

American Association of Blood Banks—Palmer House, Chicago, Illinois, November 19-21.

National Society for Crippled Children and Adults—Palmer House, Chicago, Illinois, November 28-20.

Virginia Society of Ophthalmology and Otolaryngology—Medical College of Virginia, Richmond, Virginia, November 29-December 2.

108th Annual Meeting of The Medical Society of Virginia.

The Medical Society of Virginia will hold its 108th Annual Meeting in Richmond, October 16-19. Headquarters will be the Hotel Jefferson.

Every effort has been made to arrange a scientific program which will appeal to every physician. Papers and panel discussions will cover a variety of subjects—all of unusual interest. In this connection, you are urged to study the preliminary program which will appear is the September issue of the Virginia Medical Monthly.

As always, the scientific and technical exhibits will be featured attractions. The exhibits will be located in the Jefferson Court and the mezzanine, and will be readily accessible. Physicians, more and more, are realizing the value of a good exhibit, and our members will wish to spend as much time as possible visiting the various booths.

Something new in the way of entertainment is being planned and will make the cocktail party and banquet on Tuesday evening a "must" on everyone's social calendar.

Although the Hotel Jefferson is unable to accommodate all who attend, Richmond is fortunate in having many excellent hotels. Reservations can be secured at the John Marshall (5th & Franklin), William Byrd (2501 West Broad), Richmond (9th & Grace), Raleigh (9th & Bank), and King Carter (8th & Broad).

Remember the dates—October 16-19.

Dr. H. B. Mulholland,

Charlottesville, was re-elected to the Council on Medical Service of the American Medical Association at its annual meeting in June.

Dr. Parker Again Honored.

A plaque to Dr. William H. Parker, Richmond, has been dedicated at Parker Athletic Field. The Richmond Sportsmen's Club donated the plaque. Dr. Parker has long been considered the guiding force in Richmond athletics.

American Board of Obstetrics and Gynecology.

Dr. F. Bayard Carter, Duke University, Durham, N. C., has been named as president of the Board, succeeding Dr. Walter T. Dannreuther who has served for twenty-five years.

Applications for certification for the 1956 Part I Examinations are now being accepted. Candidates are urged to make such application as early as possible, and before October 1, 1955.

Dr. William F. Barry, Jr.,

Recently of Clifton Forge, where he was with the Department of Roentgenology of the C. & O. Hospital, is now located in Durham, N. C.

Dr. William W. Old, III,

Has recently completed his residency at the University of Virginia Hospital and has returned to Norfolk. His office is in the Medical Arts Building.

Dr. James K. Hall, Jr.,

Has recently joined the staff of Westbrook Sana-

torium, Richmond. He is a graduate of the Medical College of Virginia and served internship and residencies at Butler Hospital, Providence, R. I., Eastern State Hospital, Williamsburg, and in New York City. His father was a co-founder of Westbrook Sanatorium.

American College of Chest Physicians.

At the meeting of the College, held in Atlantic City, June 1-5, Dr. Dean B. Cole, Richmond, was re-elected Regent for Virginia. Dr. C. Lydon Harrell, Norfolk, continues to serve as Governor for Virginia.

Dr. Ben H. Hines,

Recently of Hampton, is now located at Keokee.

Urology Award.

The American Urological Association offers an annual award of $1000 (first prize $500, second $300 and third $200) for essays on the result of some clinical or laboratory research in Urology. Competition is limited to urologists who have been graduated not more than ten years and to men in training to become urologists.

For full particulars, write William P. Didusch, executive secretary, 1120 North Charles Street, Baltimore, Maryland.

Dr. S. E. Hughes, Jr.,

Norfolk, has been named president of the stockholders of the Norfolk Tar Baseball Team.

Dr. Edward C. Joyner

Has been elected as chief of the medical staff of the Louise Obici Memorial Hospital, Suffolk, for the ensuing year. Others elected are Dr. William M. Eddy, vice-president; Dr. George Carroll, secretary; and Drs. J. M. Habel, Jr., Maurice M. Bray and Charles W. Steel, members of the executive committee at large.

The New York Academy of Medicine

Will present its Twenty-eighth Annual Graduate Fortnight, October 10-21. The subject for this year will be Problems of Aging. There will be 6 morning panel meetings, afternoon hospital clinics, 20 evening lectures, 4 evening panel meetings, and a scientific exhibit.

Inquiries relative to the Graduate Fortnight should be addressed to the Executive Secretary, Committee on Medical Education, The New York Academy of Medicine, 2 East 103rd Street, New York 29, N. Y.

Dr. William C. Humphries

Has been named a co-chairman for the 1955 Community Chest Campaign in Warren County and Front Royal.

Annual Prize Essay Contest.

The American Dermatological Association is again offering a series of prizes for the best essays for original work, not previously published, relative to some fundamental aspect of dermatology or syphilology. Cash prizes of five, four, three, and two hundred dollars will be awarded. Manuscripts typed in English with double spacing and ample margins, together with illustrations, charts and tables, all of which must be in triplicate, are to be submitted not later than November 15, 1955.

Further information may be obtained from Dr. J. Lamar Callaway, Secretary, American Dermatological Association, Duke Hospital, Durham, N. C.

Dr. Thomas Wheeldon,

Richmond, was elected president of the Middle Atlantic Chapter of the American Rhododendron Society at its annual meeting in Washington recently.

Dr. E. G. Gill,

Roanoke, was recently appointed regent for the International College of Surgeons for the State of Virginia.

Psychiatric Institute.

The Third Annual Psychiatric Institute will be held September 21st at the New Jersey Neuro-Psychiatric Institute, Princeton. This year the theme will concentrate on children and their problems, as well as residential centers for treatment of such problems. Among the speakers will be Dr. R. Finley Gayle, Jr., Richmond, president of the American Psychiatric Association.

Announcements are in preparation and will be available soon. If our readers would like to receive an invitation, please contact Dr. Robert S. Garber, Superintendent, New Jersey Neuro-Psychiatric Institute, Box 1000, Princeton, New Jersey.

Wanted.

A doctor to assist or completely take over an established practice in a small town on the Eastern Shore of Virginia. Well equipped brick office, ten miles from excellent hospital. Reply to Dr. W. L. Cosby, Painter, Virginia. Telephone—Belle Haven 2-6103. (*Adv.*)

Wanted.

Electrocardiograph machine, direct or indirect writer. Give complete specifications, age, condition and price. Address reply to P. O. Box 130, Richmond, Virginia. (*Adv.*)

Obituaries . . . .

Dr. Nash P. Snead,

Beloved physician of Cartersville, died July 7th, following an illness of several weeks. He was eighty-three years of age and received his medical degree from the Medical College of Virginia in 1893. Dr. Snead began his practice in Cumberland County following his graduation and was a well known figure throughout Cumberland, Powhatan and Goochland Counties. He began his work in a pony cart and always traveled with a small dog sitting beside him. Dr. Snead continued his practice up to his final illness and four years ago, he estimated he had delivered more than 2,000 babies. He was a Life Member of The Medical Society of Virginia, having joined in 1893. His wife, seven daughters and four sons survive him.

Dr. Roderick Dew,

Prominent physician of Carolina County, died at his home in Woodford, July 1st. He was eighty-eight years of age and graduated from the Medical College of Virginia in 1891. Dr. Dew had practiced in Caroline County for more than sixty years. He was a former moderator of the Goshen Baptist Association. Dr. Dew was a Life Member of The Medical Society of Virginia, having joined in 1893. A daughter survives him.

Dr. Michael Price DeBoe,

Prominent eye specialist of Miami, Florida, died June 29th following a heart attack. He was a native of Bedford County, Virginia, and sixty-nine years of age. Dr. DeBoe was a graduate of the former University College of Medicine, Richmond, in 1903. Following his graduation, he was for several years located at Bedford. During World War I, he was commanding officer of the medical office at the Key West Naval Base and in 1924 he moved to Miami. Dr. DeBoe was emeritus chief of staff of the eye, ear, nose and throat department of the Jackson Memorial Hospital. He had been a member of The Medical Society of Virginia since 1909. His wife survives him.

Dr. Richard Hawes Manson,

Well known physician of McKenney, died July 3rd, following a long illness. He was a native of Brunswick County and seventy-two years of age. Dr. Manson graduated from the Medical College of Virginia in 1905, following which he opened his office at McKenney and had practiced there for thirty-six years prior to his retirement. He had been a member of The Medical Society of Virginia for forty years. His wife and three children survive him.

Dr. Arthur Marion Gates,

Ararat, died July 4th, at the age of sixty-three. He attended Roanoke College and graduated from the Medical College of Virginia in 1919. Dr. Gates had been a member of The Medical Society of Virginia for thirty years. His wife, three sons and two daughters survive him.

Dr. Seth Bridgman Perry,

Prominent physician of Hopewell, died June 21st following a heart attack in his office. He was a native of Williamston, North Carolina, and sixty-seven years of age. Dr. Perry graduated from the Medical College of Virginia in 1914 and had practiced in Hopewell since 1915. He was prominent in civic affairs in Hopewell, having served as a member of City Council since 1928, with the exception of two two-year periods. He had also served as vice-mayor for a number of years. Dr. Perry was a Mason, member of the American Legion and the Kiwanis Club. He had been a member of The Medical Society of Virginia since 1941. His wife and a sister survive him.

PRO-BANTHĪNE FOR ANTICHOLINERGIC ACTION



Abnormal Motility as the Cause of Ulcer Pain

Until recently the general opinion was held that ulcer pain was primarily caused by the presence of hydrochloric acid on the surface of the ulcer.

Present investigations[1,2] on the relationship of acidity and muscular activity to ulcer pain have led to the following concept of its etiologic factor:

> ". . . abnormal motility[2] is the fundamental mechanism through which ulcer pain is produced. For the production and perception of ulcer pain there must be, one, a stimulus, HCl or others less well understood; two, an intact motor nerve supply to the stomach and duodenum; three, altered gastro-duodenal motility; and four, an intact sensory pathway to the cerebral cortex."

Pro-Banthīne® has been demonstrated consistently to reduce hypermotility of the stomach and intestinal tract and in most instances also to reduce gastric acidity. Dramatic remissions[1] in peptic ulcer have followed Pro-Banthīne therapy. These remissions (or possible cures) were established not only on the basis of the disappearance of pain and increased subjective well-being but also on roentgenologic evidence.

Pro-Banthīne Bromide (Beta-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) has other fields of usefulness, particularly in those in which vagotonia or parasympathotonia is present. These conditions include hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm.

1. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthīne, Gastroenterology *25*:416 (Nov.) 1953.

2. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

SEARLE

THE
KEELEY
INSTITUTE
447 W. Washington St.
GREENSBORO,
NORTH CAROLINA

Out-Patient Clinic
And Hospital For Rehabilitation Of
The ALCOHOLIC

A. F. Fortune, MD: Medical Director
Ben F. Fortune, MD: Associate Medical Director
R. H. Dovenmuehle, MD: Consultant in Psychiatry

In-patients are accepted in state of acute alcoholism. No waiting period required.

Registered by American Medical Association

Medical College of Virginia
HOSPITAL DIVISION
RICHMOND, VIRGINIA

A health center using the latest methods of diagnosis and treatment of disease.

MEDICAL COLLEGE OF VIRGINIA HOSPITAL
OUT-PATIENT DEPARTMENT
SAINT PHILIP HOSPITAL
DOOLEY HOSPITAL

The patient's welfare is our primary interest.

C. P. CARDWELL, JR., *Director*

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

The . . . Thompson Homestead School

FOR EXCEPTIONAL CHILDREN

Year round private home and school for infants, children and adults on pleasant 250 acre farm near Charlottesville.

Write for booklet.

MRS. J. BASCOM THOMPSON, *Principal*

FREE UNION VIRGINIA

The State Board of Medical Examiners of Virginia

The next meeting of the Board will be held at Richmond Hotel, Richmond, Virginia December 6, 1955 and the examinations will be held at the same hotel December 7, 8 and 9. November 21, 1955 is the deadline for receipt of applications for the examination and documents and papers to be discussed and acted upon by the Board. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

McGUIRE CLINIC

ST. LUKE'S HOSPITAL

RICHMOND, VIRGINIA

General Medicine

HUNTER H. McGUIRE, M.D.
MARGARET NOLTING, M.D.
JOHN P. LYNCH, M.D.
WM. H. HARRIS, JR., M.D.
JOHN B. CATLETT, M.D.
ROBERT W. BEDINGER, M.D.

Orthopedic Surgery

JAMES T. TUCKER, M.D.
BEVERLEY B. CLARY, M.D.
EARNEST B. CARPENTER, M.D.

Ophthalmology, Otolaryngology

FRANCIS H. LEE, M.D.

General Surgery

WEBSTER P. BARNES, M.D.
JOHN H. REED, JR., M.D.
JOHN ROBERT MASSIE, JR., M.D.
JOSEPH W. COXE III, M.D.

Dental Surgery

JOHN BELL WILLIAMS, D.D.S.

Urology

AUSTIN I. DODSON, M.D.
CHAS. M. NELSON, M.D.
AUSTIN I. DODSON, JR., M.D.

Pediatrics

HUBERT T. DOUGAN, M.D.

Obstetrics

W. HUGHES EVANS, M.D.
W. H. COX, M.D.
JAMES M. WHITFIELD, M.D.

Bronchoscopy

GEORGE AUSTIN WELCHONS, M.D.

Roentgenology

JESSE N. CLORE, JR., M.D.
STUART J. EISENBERG, M.D.

Pathology

J. H. SCHERER, M.D.

Treasurer: RICHARD J. JONES, BS., C.P.A.



Part View of Park Grounds

TERRACE HILL was specifically built for a Nursing Home. Superb 24 hours daily care. Under supervision of a Registered Nurse and Resident Externe. Quiet atmosphere. Trained Dietitian. Accommodates 50 guests. Private and semi-private rooms with lavatories. Rates $45.00 to $75.00 weekly for room, board and general nursing care. Your inspection invited.

Professional Nursing Care

TERRACE HILL

Nursing Home, Inc.

"Understanding Care"

2112 MONTEIRO AVE., RICHMOND, VA.



Comfortable Lounges

Around the Clock

NURSING CARE

•

Convalescents
Chronic Cases
Elderly People



Wide, Long Hallways

Each Guest Under Care of Own Doctor.

Professional care supervised by trained nurse. Doctors orders carefully followed. No parking problem. Regularly inspected by City Health Department. For additional information

Write or Call Superintendent

TERRACE HILL NURSING HOME, Dial 3-3993

Gill Memorial Eye, Ear and Throat Hospital, Inc.

Roanoke, Virginia



STAFF

ELBYRNE G. GILL, M. D.
HOUSTON L. BELL, M. D.
THOMAS QUILTY, M. D.
DORIS L. JANES, B. S., O. D.
(Orthoptics and Contact Glasses)
S. H. HOLLAND, M. D.
ROBERT B. JONES, JR., M. D.

A Modern, Fireproof Hospital, Specially Designed and Equipped for the Medical and Surgical Care of Ophthalmology, Otolaryngology, Facio-Maxillary Surgery, Bronchoscopy and Esophagoscopy.

Complete Laboratory and X-Ray Equipment.

Physicians and Graduate Nurses in Constant Attendance.

The Hospital offers a residentship of three years to a graduate of an approved medical school, who has had an internship of at least one year in an approved hospital.

For further information, address

BUSINESS MANAGER, BOX 1789, ROANOKE, VIRGINIA

RIVERSIDE HOSPITAL, Newport News, Va.



A General Hospital (265 beds) with Departments in Medicine, Surgery, Obstetrics, Pathology, Radiology, Pediatrics and Nursing. The Hospital is accredited by the Council on Medical Education of the American Medical Association for training first year interns, residencies in the surgical specialties for one and two years, general practices two years full approval, internal medicine, and obstetrics and gynecology, and the School of Nursing is accredited by the Virginia State Board of Nurse Examiners.

DAVID E. WATSON,
Administrator

MISS ROSE M. DeWEVER, R.N.,
Director, School of Nursing

RIVERSIDE CONVALESCENT HOME

Sophia & Fauquier Sts. **Fredericksburg, Virginia**



For convalescent, aged, chronically ill, and retired persons.

Centrally located in Historic Fredericksburg, on the beautiful Rappahannock, in the former Mary Washington Hospital Building. Completely redecorated and refurnished.

Eighty Bed Capacity

Medical Supervision

Inspection Invited

Rates:
$30.00 to $75.00 per week

RICHMOND EYE HOSPITAL
RICHMOND EAR, NOSE AND THROAT HOSPITAL
(COMBINED)

RICHMOND, VIRGINIA



A new non-profit Community Hospital specially constructed for the treatment of Eye, Ear, Nose and Throat Diseases, including Laryngeal Surgery, Bronchoscopy and Plastic Surgery of the Nose.

Professional care offered a limited number of charity patients.

ADDRESS: **JULIA WAGNER WATERS, R.N.,** ***Administrator*** **408 North 12th Street**

ST. ELIZABETH'S HOSPITAL

RICHMOND 20, VIRGINIA

STAFF

Guy W. Horsley, M.D.	General Surgery and Gynecology
D. Coleman Booker, M.D.	General Surgery and Gynecology
Austin I. Dodson, M.D.	Urology
Austin I. Dodson, Jr., M.D.	Urology
J. Edward Hill, M.D.	Urology
Douglas G. Chapman, M.D.	Internal Medicine
Eimer S. Robertson, M.D.	Internal Medicine
T. E. Stanley, M.D.	Internal Medicine
Fred M. Hodges, M.D.	Roentgenology
L. O. Snead, M.D.	Roentgenology
Hunter B. Frischkorn, Jr., M.D.	Roentgenology
Helen Lorraine	Medical Illustration

ADMINISTRATION

William Scott — Business Manager

SCHOOL OF NURSING

The School of Nursing is affiliated with The Johns Hopkins Hospital School of Nursing for a three months' course each in Pediatrics and Obstetrics, and with the Tucker's Hospital in Richmond for a 12 weeks course in Psychiatry.

Address: Superintendent of Nurses

Third Decade of Nursing

MODERN IN EQUIPMENT

MRS. PLYLER'S

KATE E. PLYLER (1876-1947)

OLD IN TRADITION

NURSING HOME

MARY INGRAM CLARK

CONVALESCENT — CHRONIC — AGED

- Equipped for oxygen and transfusions
- 30 special & general nurses
- 24-hour nursing care
- Centrally located
- 50-bed capacity
- Dietician
- Rates from $42.00 to $70.00 per week for room, board and general nursing care.





For further information write or call MRS. GENE CLARK REGIRER, Supt.

1613-15-17 Grove Avenue—Richmond, Virginia—Telephone 84-3221

Upjohn
KALAMAZOO

Indicated wherever oral cortisone or hydrocortisone is effective. Available in 5 mg. tablets in bottles of 30 and 100. Usual dosage is ½ to 1 tablet three or four times daily

Deltasone*

Less sodium retention, less potassium depletion

*Trademark for the Upjohn brand of prednisone (delta-1-cortisone)

STUART CIRCLE HOSPITAL

413-21 Stuart Circle
RICHMOND, VIRGINIA

Medicine:
Manfred Call, III, M.D.
M. Morris Pinckney, M.D.
Alexander G. Brown, III, M.D.
John D. Call, M.D.
Wyndham B. Blanton, Jr., M.D.

Obstetrics and Gynecology:
Wm. Durwood Suggs, M.D.
Spotswood Robins, M.D.
Edwin B. Parkinson, M.D.

Orthopedics:
Beverley B. Clary, M.D.

Pediatrics:
Charles P. Mangum, M.D.
Edward G. Davis, Jr., M.D.

Ophthalmology, Otolaryngology:
W. L. Mason, M.D.

Pathology:
Regena Beck, M.D.

Anesthesiology
William B. Moncure, M.D.
Heth Owen, Jr., M.D.

Surgery:
A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr., M.D.

Urological Surgery:
Frank Pole, M.D.

Oral Surgery:
Guy R. Harrison, D.D.S.

Plastic Surgery:
Hunter S. Jackson, M.D.

Roentgenology and Radiology:
Fred M. Hodges, M.D.
L. O. Snead, M.D.
Hunter B. Frischkorn, Jr., M.D.
William C. Barr, M.D.

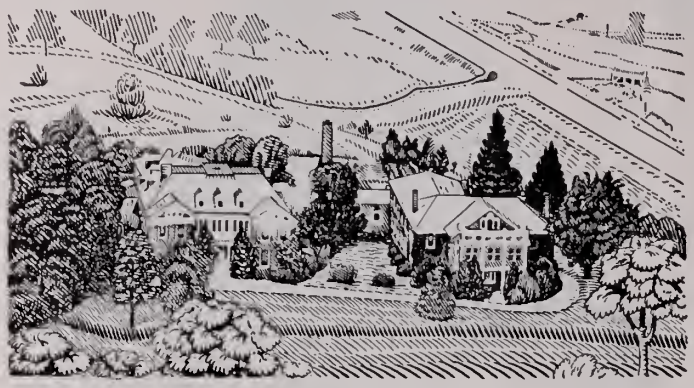
Physiotherapy:
Miss Etheleen Dalton

Director:
Charles C. Hough

SAINT ALBANS

A PRIVATE PSYCHIATRIC HOSPITAL

RADFORD, VIRGINIA



STAFF

James P. King, M. D., Director

James K. Morrow, M. D. Thomas E. Painter, M. D. Daniel D. Chiles, M. D.

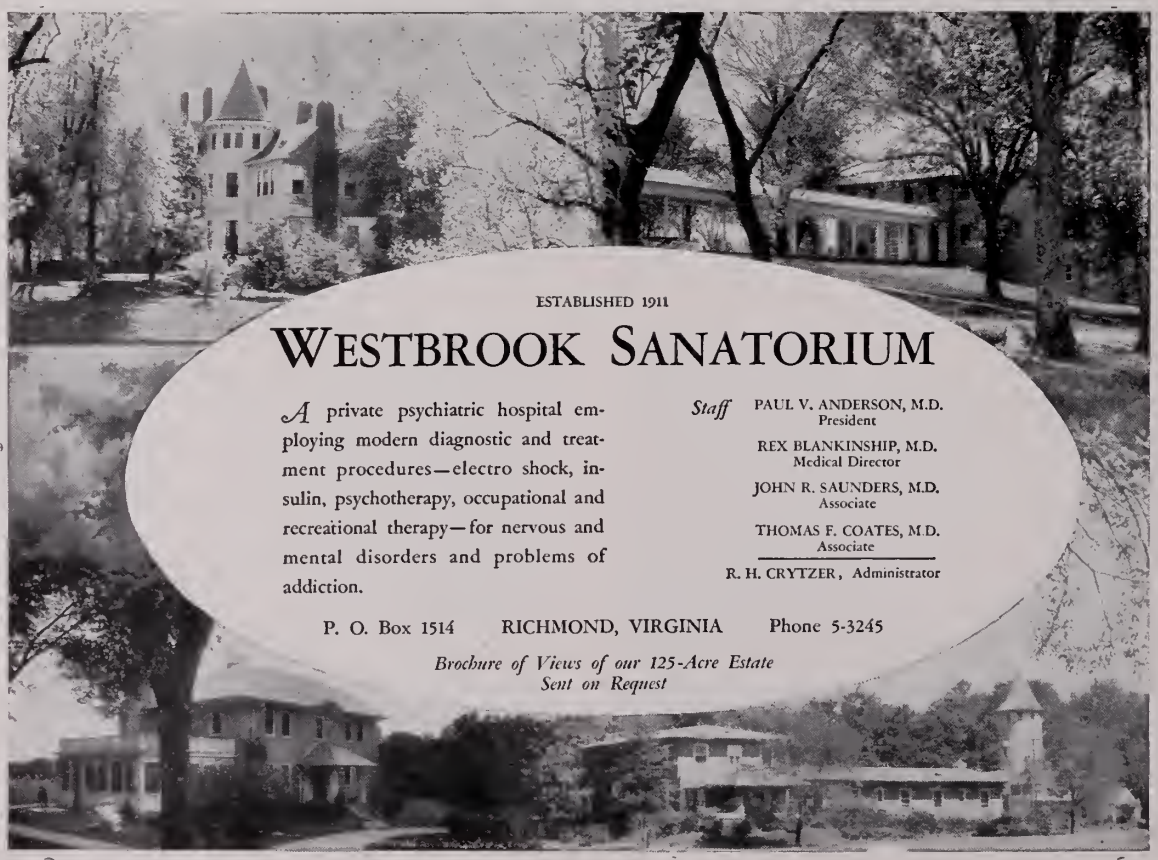
James L. Chitwood, M. D., Medical Consultant

Affiliated Clinic Offering Psychiatric and Psychological Evaluation and Therapy:

BLUEFIELD MENTAL HEALTH CENTER

1400 Bland Street **Bluefield, W. Va.**

David M. Wayne, M. D., Director



ESTABLISHED 1911

WESTBROOK SANATORIUM

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

Staff

PAUL V. ANDERSON, M.D.
President

REX BLANKINSHIP, M.D.
Medical Director

JOHN R. SAUNDERS, M.D.
Associate

THOMAS F. COATES, M.D.
Associate

R. H. CRYTZER, Administrator

P. O. Box 1514 RICHMOND, VIRGINIA Phone 5-3245

Brochure of Views of our 125-Acre Estate Sent on Request

Appalachian Hall • Asheville, North Carolina

ESTABLISHED 1916



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, SR., M.D.
Diplomate in Psychiatry
WM. RAY GRIFFIN, JR., M.D.

MARK A. GRIFFIN, SR., M.D.
Diplomate in Psychiatry
MARK A. GRIFFIN, JR., M.D.

For rates and further information write APPALACHIAN HALL, ASHEVILLE, N. C.

TUCKER HOSPITAL Inc.

212 West Franklin Street,

Richmond, Virginia

A private hospital accepting for diagnosis and treatment organic neurological conditions, selected psychiatric and alcoholic cases, metabolic disturbances of an endocrine nature, individuals who are having difficulty with their personality adjustments, and children with behavior problems. Patients with general medical disorders admitted for treatment under our staff of visiting physicians.

Under the Professional Charge of

DR. HOWARD R. MASTERS, DR. JAMES ASA SHIELD
AND ASSOCIATES

A Modern Hospital for the Treatment of Alcoholism Exclusively

- A private hospital offering scientific, institutional, medical, psychological, reflex, reduction and other methods for the rehabilitation of consent patients suffering from alcoholism.

- All equipment modern with facilities to take care of 50 patients both male and female.

- Under the direction of a competent licensed M. D. with five consultant physicians subject to call. Registered Nurses in charge 24 hours daily.



Approved and licensed by the Virginia State Hospital Board. Atop beautiful Mt. Regis, five miles West of Roanoke, on Highway 11, in the quiet serene mountains of Virginia, conducive to rest, comfort and recuperation. Doctors inspection invited. For information phone or write.

WHITE CROSS HOSPITAL

Five Miles West of Roanoke on Route No. 11.
Salem, Virginia — Phone Salem 287

WHITE CROSS HOSPITAL

Copyright 1948. H. N. Alford, Atlanta, Ga.

GRADE A PASTEURIZED PRODUCTS

DIAL 5501

GRADE A MILK
HOMOGENIZED MILK (Natural Vitamin D added)
GOLDEN GUERNSEY MILK
GOLDEN FLAKE BUTTERMILK
SKIM MILK—COFFEE CREAM
WHIPPING CREAM—COTTAGE CHEESE
DARI-RICH CHOCOLATE MILK
GARST BROS. DAIRY BUTTER

"ROANOKE'S MOST MODERN DAIRY"

GARST BROS. DAIRY INC.

DIAL 5501

LABORATORY CONTROL FOR YOUR PROTECTION

Foot-so-Port Shoe Construction and its Relation to Weight Distribution



- Insole extension and wedge at inner corner of heel where support is most needed.
- Special Supreme rubber heels are longer than most anatomic heels and maintain the appearance of normal shoes.
- The patented arch support construction is guaranteed not to break down.
- Innersoles are guaranteed not to crack, curl, or collapse. Insulated by a special layer of Texon which also cushions firmly and uniformly.
- Foot-sa-Port lasts were designed and the shoe construction engineered with orthopedic advice.
- Over nine million pairs of men's, women's and children's Foot-so-Port Shoes have been sold.
- By a special process, using plastic positive casts of feet, we make more custom shoes for polio, club feet and all types of abnormal feet than any other manufacturer.

Write for details or contact your local **FOOT-SO-PORT** *Shoe Agency. Refer to your Classified Directory*

Foot-so-Port Shoe Company, Oconomowoc, Wis.

At All

DEPENDABLE

PRESCRIPTION SERVICE

and

SERVICE TO PHYSICIANS

PATTERSON'S

SAFE SERVICE DRUG STORES

Prescription Specialists

Lynchburg, Va. **Martinsville, Va.**
Danville, Va. **Altavista, Va.**
Winston-Salem, N. C.

ANNUAL MEETING

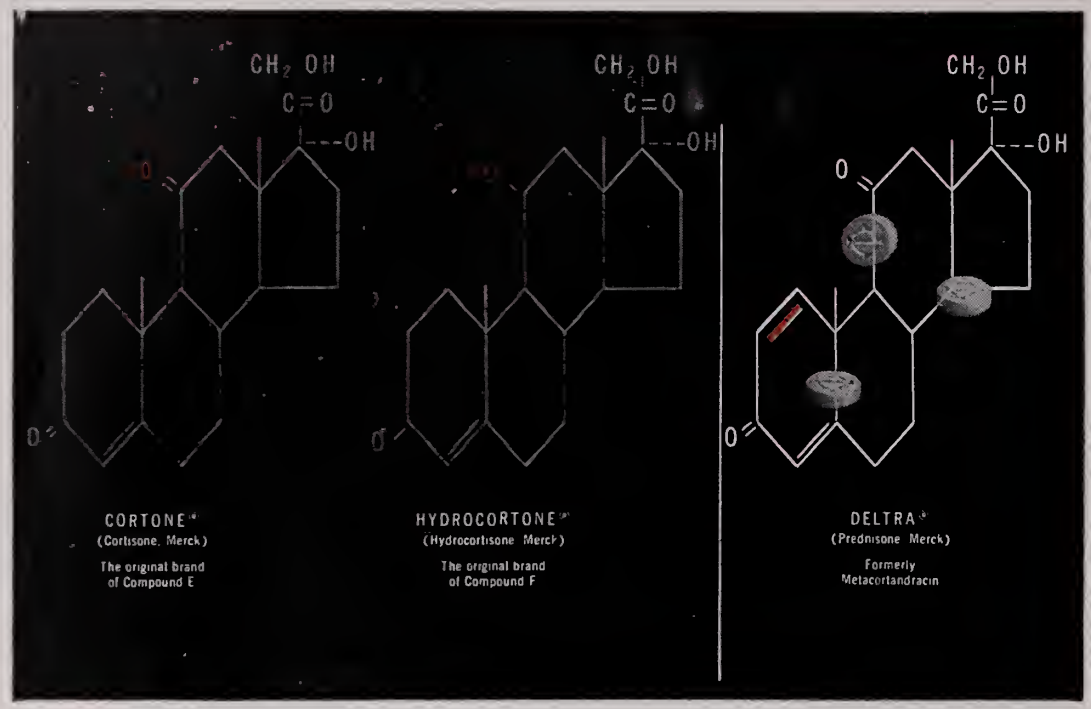
The Medical Society of Virginia

Richmond - October 16 - 19, 1955

DELTRA® TABLETS

(PREDNISONE, MERCK)

(FORMERLY METACORTANDRACIN)



DELTRA is the Merck brand of the new steroid, prednisone

(FORMERLY METACORTANDRACIN)

DELTRA is a new synthetic analogue of cortisone. DELTRA produces anti-inflammatory effects similar to cortisone, but therapeutic response has been observed with considerably lower dosage. With DELTRA, favorable results have been reported in rheumatoid arthritis with an initial daily dosage of 20 to 30 mg. and a daily maintenance dose range between 5 and 20 mg.

Salt and water retention are less likely with recommended doses of DELTRA than with the higher doses of cortisone required for comparable therapeutic effect.

Indications for DELTRA: Rheumatoid arthritis, bronchial asthma, inflammatory skin conditions.

SUPPLIED: DELTRA is supplied as 5 mg. tablets (scored) in bottles of 30.

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

Enriched Bread

a Valiant Guardian Against Deficiency Disease



As a result of the nationwide enrichment of bread, the average American consumes notably more thiamine, riboflavin, niacin, and iron.[1] Enriched bread has thus served as a vigilant guardian against beriberi, ariboflavinosis, pellagra, and iron-deficiency disease.[2]

According to calculated values, the food supply of the nation during 1942-1948 provided 25 per cent more thiamine, 10 per cent more riboflavin, 15 per cent more niacin, and 14 per cent more iron than it would have without the nationwide enrichment of bread and flour.[3,4]

In consequence of this nutritional enhancement of the nation's food supply, enriched bread has been a material aid in improving national nutritional health.[2,4,5,6]

Enriched bread also supplies important amounts of high-grade protein, calcium, and nutrient energy. Its protein, comprising flour protein and milk protein, contributes significantly to sound growth and tissue maintenance.

---

1. Groggins, P.H.: The High Price of Eating Well, J. Agr. & Food Chem. *1*:1124 (Nov. 25) 1953.
2. Sebrell, W.H., Jr.: Trends and Needs in Nutrition, J.A.M.A. *152*:42 (May 2) 1953.
3. Nutrients Available for Consumption per Capita per Day, 1909-1948, United States Department of Agriculture, Miscellaneous Publication 694, 1949.
4. Jolliffe, N.: The Pathogenesis of Deficiency Disease, in Jolliffe, N.; Tisdall, F.F., and Cannon, P.R.: Clinical Nutrition, New York, Paul B. Hoeber, Inc., 1951, Chap. 1.
5. Flour and Bread Enrichment, 1949-50, The Committee on Cereals, Food and Nutrition Board, National Research Council, 1950.
6. Sherman, H.C.: The Nutritional Improvement of Life, New York, Columbia University Press, 1950, pp. 86-87.

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

THE VIRGINIA BAKERS COUNCIL
In co-operation with
THE AMERICAN BAKERS ASSOCIATION



KARO SYRUP SOLVES A SUMMER PROBLEM



Karo is the answer when other carbohydrate modifiers cause flatulence, colic, fermentation or allergy. It is bacteria free and hypoallergenic . . . produces no reactions. It is easily digested and assimilated by premature and newborn infants, well or sick.

Babies gain weight rapidly on Karo formulas. One ounce provides 120 calories of solid nutrition derived from dextrose, dextrins and maltose. The palatability of Karo encourages full feedings.

Karo mixes readily in all proportions with cow's milk, evaporated milk and water. Available at all grocery stores. Light or dark Karo Syrup may be used interchangeably in the formula.

The *foundation* of the individualized formula for 3 generations

CORN PRODUCTS REFINING COMPANY

17 Battery Place, New York 4, N.Y.



*Trademark for the Upjohn brand of prednisolone (delta-l-hydrocortisone)

Complete
Printing and Binding Service

Commercial, Book and Job Work, Catalogues—Publications
Advertising Literature, Booklets—Broadsides
Office and Factory Forms
Loose-Leaf and Manifold Forms—Ledger Leaves and Loose-Leaf Binders
Paper Ruling
Complete Binding Equipment

Complete Service Under One Roof

Acquaint us with your requirements. We serve you efficiently and economically.

Dial 3-1881

WILLIAMS PRINTING CO.

11-13-15 North Fourteenth Street **RICHMOND, VIRGINIA**

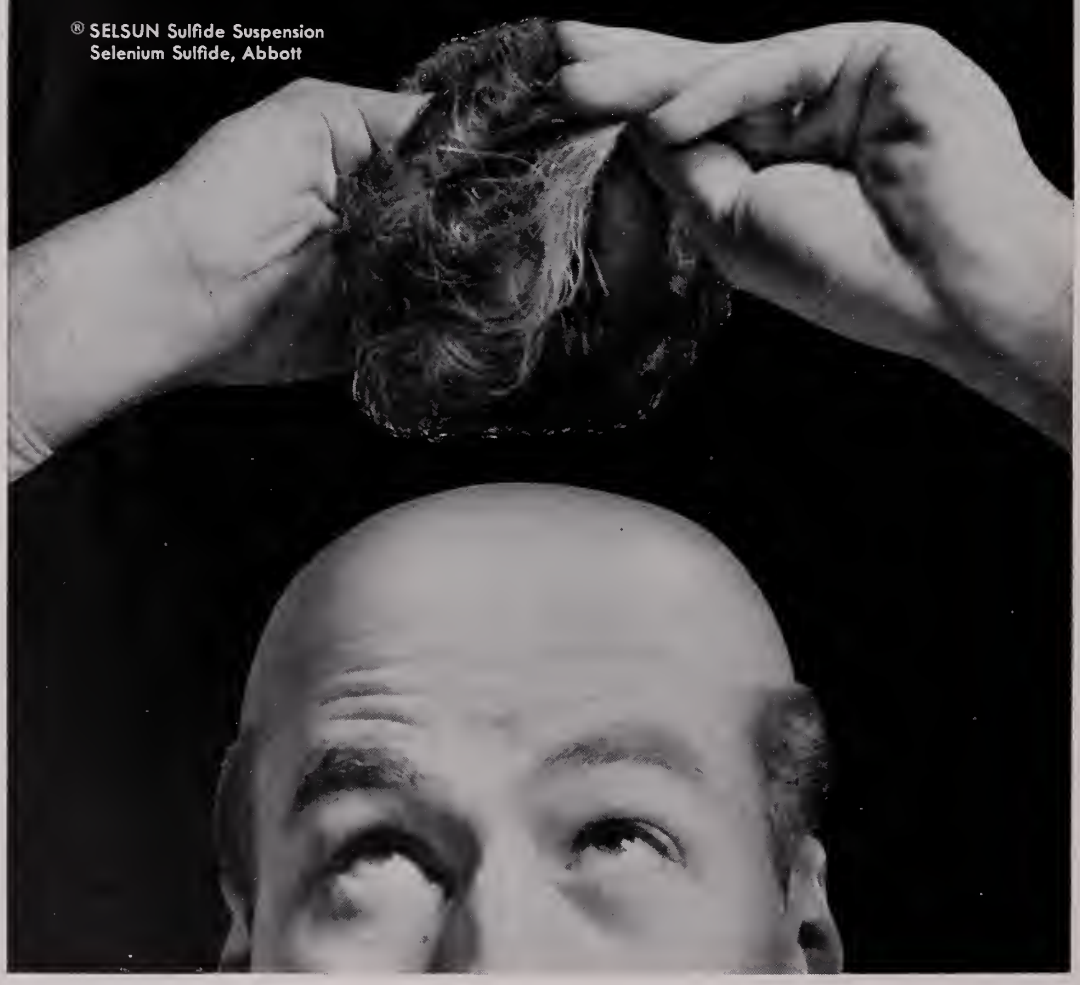
once in a while
you'll meet a patient
who doesn't need

SELSUN®

Billiard-ball bare or covered with hair, many scalps you see need SELSUN. It's effective in 81 to 87% of all seborrheic dermatitis cases—and in 92 to 95% af dandruff cases. Itching, burning symptoms disappear with just two or three SELSUN applications. Scaling is cantralled with just six to eight applications. Easy to use, SELSUN is applied and rinsed out while washing the hair.
In 4-fluidounce bottles, on prescriptian only.

Abbott

® SELSUN Sulfide Suspension
Selenium Sulfide, Abbott



508162

Every Virginia Doctor Should Have These Books!

The history of medicine in the Old Commonwealth from Jamestown to the beginning of the present century is a work every doctor should be proud to own. Complete and intensely interesting.

Medicine In Virginia

In 3 Volumes

Published under Auspices of

Medical Society of Virginia

Reduced price to members of the Medical Society of Virginia

3 Volumes for $5.75

(formerly $9.75)

Order through

Medical Society of Virginia

1105 West Franklin Street

Richmond, Virginia

PRICES FOR REPRINTS

of Articles Appearing in

The Virginia Medical Monthly

Trimmed Size 5¼x7⅝ ins. Type Page 3x5½ ins.

Minimum Order 100 Copies

	100	250	500	1,000	2,000
4 pp.	$ 6.00	$ 6.60	$ 8.00	$ 9.80	$13.70
8 "	10.70	12.10	13.20	17.00	23.50
12 "	15.70	17.90	20.10	25.60	37.80
16 "	16.40	19.20	22.20	28.30	40.40
20 "	18.90	23.80	27.00	33.00	49.40
24 "	21.10	25.70	28.90	38.10	52.70
32 "	28.00	34.00	39.50	55.60	75.00
Extra for Covers	6.60	7.60	10.50	12.50	18.90
Envelopes: Printed	4.00	6.10	8.30	13.20	23.70
Blank	1.20	2.80	4.40	8.30	16.50

Prices F.O.B. Richmond, Va. Shipments will be sent postpaid if check sent with order.

Orders must be placed before type is distributed.

WILLIAMS PRINTING CO.

11-13-15 North 14th Street

RICHMOND, VIRGINIA

THIS DR

is the **symbol**

of the

Standardized

Tablets

Quinidine Sulfate

Natural

0.2 Gram

(approx. 3 grains)

produced by

Davies, Rose & Co., Ltd.

By specifying the name, the physician will be assured that this standardized form of Quinidine Sulfate Natural will be dispensed to his patient.

Clinical samples sent to physicians on their request

Davies, Rose & Co., Ltd.

Boston 18, Mass.

Q4

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

For the
Discriminating
Eye Physician

Depend on the Services of a Guild Optician

in
Lynchburg, Virginia

A. G. JEFFERSON

Ground Floor **Allied Arts Bldg.**

Exlusively Optical

The American Way

is peace, prosperity, and goodwill toward our fellow man—to invest our time in educating and learning; and our money in good citizens and fine institutions.



One of the finest institutions of your State is Richmond Hotels Incorporated, one that maintains the highest modern hotel standards . . . one that combines the hospitality and charm of the old and the convenience and comfort of the new.

John Marshall William Byrd
King Carter Richmond

Richmond Hotels Incorporated

proof of performance shown by proof of preference



Sealy's Accepted Posturepedic Mattress now*

WORLD'S LARGEST SELLING POSTUREPEDIC MATTRESS

To patients suffering from morning backache due to sleeping on an inferior mattress or improperly fitted bedboards, you may suggest the Sealy Posturepedic, with confidence.

*Accepted for advertising in the Journal of the American Medical Association, Sealy's Posturepedic is now the most widely used mattress of its type in the world. Since it is correctly *firm* it insures proper sleeping posture, gives natural support and complete comfort, too. For patients bothered by "low" morning backache, possibly caused by sleeping on a flabby mattress or make-shift bedboard, you may mention the Sealy Posturepedic *knowing* it is giving helpful relief in steadily increasing thousands of cases.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Sealy

SLEEPING ON A SEALY IS LIKE SLEEPING ON A CLOUD

SEALY MATTRESS COMPANY
Railroad Avenue, Bluefield, Va.
8 South Harvie Street, Richmond, Va.

Results With

'ANTEPAR'®*

against **PINWORMS**

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against **ROUNDWORMS**

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

SELECTION PROTECTION INJECTION



THE NEW STERAJECT®

with one piece cartridge-sterile needle assembly:

- *assures sterility by eliminating handling of the needle*
- *adds greater convenience to the recognized advantages of the Steraject parenteral dosage forms*
- *is ready to use in the home, office or hospital*
- *completely obviates any need for sterilizing equipment.*

Penicillin G Procaine Crystalline in Aqueous Suspension—300,000; 600,000 and 1,000,000 units
Permapen® Aqueous Suspension—600,000 units benzathine penicillin G
Permapen Fortified Aqueous Suspension—300,000 units benzathine penicillin G plus 300,000 units procaine penicillin
Streptomycin Sulfate Solution—1 gram
Dihydrostreptomycin Sulfate Solution—1 gram

PFIZER LABORATORIES, Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y. Pfizer

395
life insurance companies approve

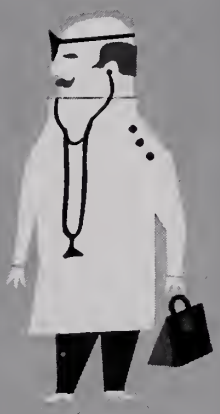
CLINITEST®
BRAND
for rapid, reliable urine-sugar testing





reliability and standardization recognized by 9 out of 10 leading insurance companies *
convenience and time-saving appreciated by thousands of examining physicians

* Recent survey of 437 insurance companies



AMES DIAGNOSTICS
Adjuncts in Clinical Management

AMES COMPANY, INC • ELKHART, INDIANA
Ames Company of Canada, Ltd., Toronto 62855

Why so many physicians

SPECIFY PABLUM CEREALS



TOMMY started on Pablum Rice Cereal at the age of 2 months. He likes its smooth texture (all Pablum Cereals are smooth). Pablum Cereals give him plenty of iron—½ oz. supplies 4.2 mg.—to help prevent iron deficiency anemia.

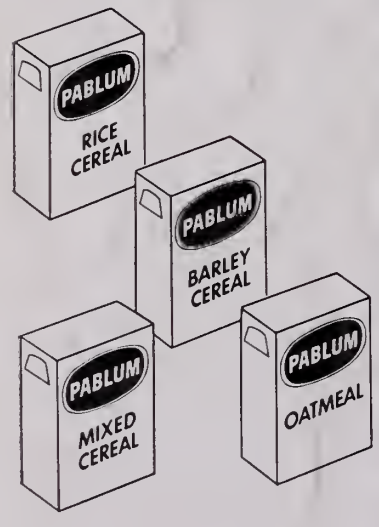


MARY LOU likes Pablum Oatmeal. Since she has been eating Pablum Cereals her growing appetite is satisfied longer.



BARBARA—like other children—enjoys *all* four Pablum® Cereals. Each variety tempts her awakening taste buds. Pablum Cereals are scientifically packaged to insure freshness. The 'Handi-Pour' spout is an extra convenience for busy mothers.

Pablum Rice Cereal
Pablum Barley Cereal
Pablum Oatmeal
Pablum Mixed Cereal



Pablum Products

DIVISION OF MEAD JOHNSON & COMPANY
EVANSVILLE, INDIANA, U. S. A.

OFFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

VIRGINIA MEDICAL MONTHLY

Contents

N.Y. ACADEMY OF MEDICINE SEP 14 1955 LIBRARY

A Few Remarks on Services for Crippled Children, A. R. Shands, Jr. . . . 381

The Use and Misuse of Antibiotics in the Treatment of Infections of the Urinary Tract, Austin I. Dodson and J. Edward Hill . . . 385

Old and New Therapy for Asthma, Susan C. Dees . . . 389

Recent Trends in the Treatment of Carcinoma of the Upper Respiratory Tract, G. S. Fitz-Hugh and S. G. Hobart, Jr. . . . 395

A Fatal Case of Pseudomembranous Enteritis Following Tetracycline Therapy, Daniel Leavitt and Horace A. Albertson . . . 401

Shortening of the Femoral Neck Following Fracture, Daniel W. Pratt . . . 404

Medical Reports on Industrial Cases, Wm. Minor Deyerle . . . 407

(Continued on page 6)

More than **96%** of all acute bacterial respiratory infections in children respond readily to . . .

ILOTYCIN, PEDIATRIC

(Erythromycin, Lilly) Ethyl Carbonate

Lilly

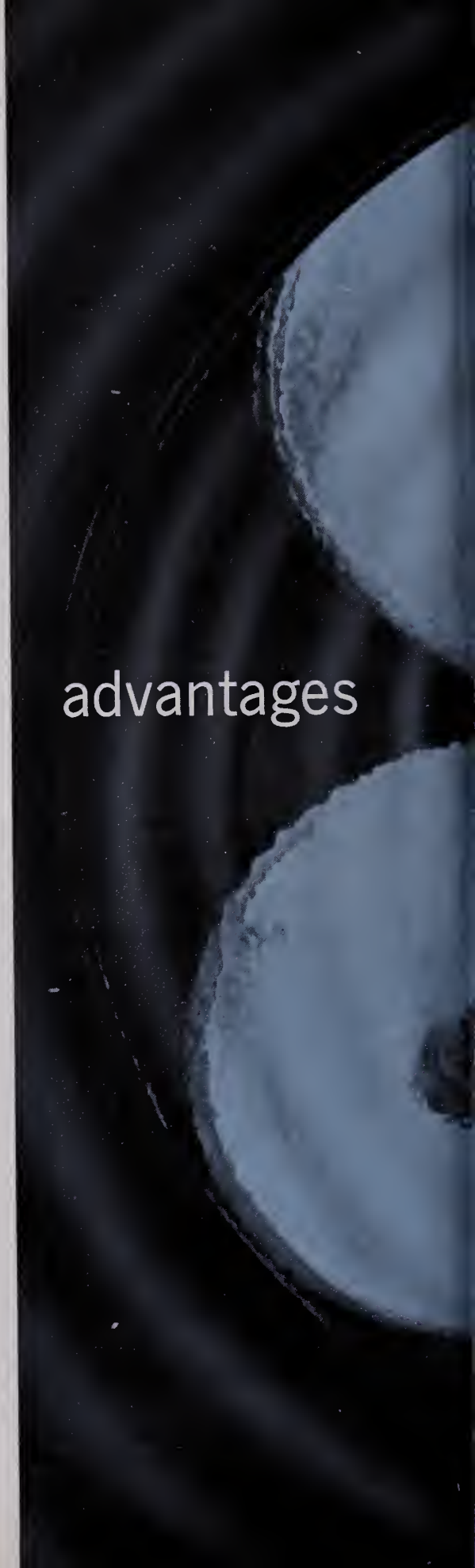
Safe, well tolerated, and pleasant to take. Bottles of 75 cc.

ELI LILLY AND COMPANY, INDIANAPOLIS 6, INDIANA, U.S.A.

532168

PROGRAM ISSUE
ANNUAL MEETING

SEPTEMBER, 1955



proved advantages

SURITAL® sodium

ultrashort-acting intravenous anesthetic

Anesthesiologists find SURITAL sodium (thiamylal sodium, Parke-Davis) a versatile anesthetic, readily adapted to all operative and manipulative procedures and to all anesthesiologic technics. SURITAL causes little laryngospasm, bronchospasm, respiratory or circulatory depression. And patients are spared unnecessary distress because SURITAL affords rapid, smooth induction and recovery usually without nausea, vomiting, or excitement.

Detailed information on SURITAL sodium is available on request.


MEDICAMENTA VERA
PARKE, DAVIS & COMPANY
DETROIT MICHIGAN

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April 1874)

Published monthly by The Medical Society of Virginia.

PUBLICATION COMMITTEE

Lewis H. Bosher, Jr., M.D., *Chairman and Editor*
Wyndham B. Blanton, M.D. Lloyd B. Burk, M.D.
with
EDITORIAL BOARD
J. Morrison Hutcheson, M.D.
Cato Drash, M.D.
Ennion S. Williams, M.D.
A. Brownley Hodges, M.D.
Hugh H. Trout, Jr., M.D.

The MONTHLY is not responsible for the opinions and statements of its contributors.

All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

Managing Editor—E. SPENCER WATKINS
1105 West Franklin Street, Richmond 20.

Annual Subscription—$2.00 Single Copies—25¢

Second-class mail privileges authorized at Richmond, Virginia

THE MEDICAL SOCIETY OF VIRGINIA

OFFICERS

President—CARRINGTON WILLIAMS, M.D., Richmond

President-Elect—JAMES P. KING, M.D., Radford

Vice-Presidents—JAMES W. LOVE, M.D., Alexandria
WAVERLY R. PAYNE, M.D., Newport News
BENJAMIN W. RAWLES, JR., M.D., Richmond

Executive Secretary-Treasurer—ROBERT I. HOWARD, Richmond

Councilors—A. A. CREECY, M.D., Newport News
WALTER P. ADAMS, M.D., Norfolk
GUY W. HORSLEY, M.D., Richmond
W. J. OZLIN, M.D., South Hill
L. P. BAILEY, M.D., Nathalie
FRANK A. FARMER, M.D., Roanoke
H. W. MILLER, M.D., Woodstock
MCLEMORE BIRDSONG, M.D., Charlottesville
JAMES P. WILLIAMS, M.D., Richlands
HARRY C. BATES, JR., M.D., Arlington

Delegates to A.M.A.
J. M. HUTCHESON, M.D., Richmond
VINCENT W. ARCHER, M.D., Charlottesville

Alternate Delegates to A.M.A.
ALLEN BARKER, M.D., Roanoke
W. LINWOOD BALL, M.D., Richmond

Executive Office—1105 W. Franklin St., Richmond 20.

INDEX TO ADVERTISERS

Abbott Laboratories ---- 14-15
American Meat Institute ---- 20
Appalachian Hall ---- 42
Arlington-Funk Laboratories ---- 22-23
Ayerst ---- 44
Baker Laboratories, Inc., The ---- Inside Back Cover
Bayer Company Division, The ---- 13
Burroughs Wellcome & Co. ---- 16, 17
Canada Dry Ginger Ale ---- 9
Contra Company ---- 29
Davies, Rose & Co., Ltd. ---- 16
Foot-so-Port Shoe Company ---- 5
First and Merchants National Bank of Richmond ---- 9
Garst Bros. Dairy Inc. ---- 6
Geigy Pharmaceuticals ---- 26
Gill Memorial Eye, Ear and Throat Hospital, Inc. ---- 37
Imperial Car Distributors Inc. ---- 48
Jefferson, A. G. ---- 17
Johnston-Willis Hospital ---- 35
Keeley Institute, The ---- 35
Keleket X-ray Corporation ---- 28
Knox. Gelatine Company, Inc., Chas. B. ---- 7
Lakeside Laboratories, Inc. ---- 46
Lederle Laboratories Division ---- 9, 54-55
Lilly and Company, Eli ---- Front Cover, 32
McGuire Clinic—St. Luke's Hospital ---- 36
Mead Johnson & Company ---- Outside Back Cover
Medical College of Virginia ---- 35
Medical Society of Virginia, The ---- 4
New York Polyclinic Medical School and Hospital, The ---- 18
Parke, Davis & Company ---- 2-3
Patterson's Safe Service Drug Stores ---- 5
Peoples Drug Stores Inc ---- 50
Pfizer Laboratories ---- 19, 49
Plyler's Nursing Home, Mrs. ---- 41
Richmond Eye Hospital—Richmond Ear, Nose and Throat Hospital ---- 38
Richmond Hotels Incorporated ---- 17
Riverside Convalescent Home ---- 39
Riverside Hospital ---- 38
Saint Albans ---- 43
Schering ---- 11, 30-31
Sealy Mattress Company ---- 21
Searle & Co. G. D. ---- 33
Sharpe & Dohme ---- 5, 6, 8, 12, 18, 37, 39, 41, 44, 53
Squibb ---- 52
State Board of Medical Examiners of Virginia, The ---- 35
St. Elizabeth's Hospital ---- 40
Stuart Circle Hospital ---- 40
Terrace Hill Nursing Home Inc. ---- 36
Thompson Homestead School, The ---- 35
Tucker Hospital, Inc. ---- 42
United Insurance Company ---- 24
United States Brewers Foundation ---- 45
Upjohn Company, The ---- 25, 51
Valetine Company, Inc. ---- 21
Viceroy Cigarettes ---- 47
Virginia Bakers Council, The ---- 10
Virginia Medical Monthly ---- 4
Westbrook Sanatorium ---- 43
White Cross Hospital ---- 34
Williams Printing Co. ---- 12
Winthrop-Stearns, Inc. ---- 56
Wyeth ---- 27

At All

DEPENDABLE

PRESCRIPTION SERVICE

and

SERVICE TO PHYSICIANS

PATTERSON'S
SAFE SERVICE DRUG STORES

Prescription Specialists

Lynchburg, Va. **Martinsville, Va.**
Danville, Va. **Altavista, Va.**
Winston-Salem, N. C.

Foot-so-Port Shoe Construction and its Relation to Weight Distribution



- Insole extension and wedge at inner corner of heel where support is most needed.
- Special Supreme rubber heels are longer than most anatomic heels and maintain the appearance of normal shoes.
- The patented arch support construction is guaranteed not to break down.
- Innersoles are guaranteed not to crack, curl, or collapse. Insulated by a special layer of Texon which also cushions firmly and uniformly.
- Foot-so-Port lasts were designed and the shoe construction engineered with orthopedic advice.
- Over nine million pairs of men's, women's and children's Foot-so-Port Shoes have been sold.
- By a special process, using plastic positive casts of feet, we make more custom shoes for polio, club feet and all types of abnormal feet than any other manufacturer.

Write for details or contact your local **FOOT-SO-PORT** *Shoe Agency. Refer to your Classified Directory*

Foot-so-Port Shoe Company, Oconomowoc, Wis.

1950 Cortone® | **1952 Hydrocortone®**
1954 'Alflorone' | **1955 Deltra®**

'Hydeltra' tablets

(PREDNISOLONE, MERCK)

2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

SHARP & DOHME

Philadelphia 1, Pa.
Division of Merck & Co., Inc.

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 'Hydeltra'

DELTRA®

tablets

(Prednisone, Merck)

2.5 mg. - 5 mg. (scored)

the delta$_1$ analogue of cortisone

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

Indications:

Rheumatoid arthritis
Bronchial asthma
Inflammatory skin conditions

GRADE A PASTEURIZED PRODUCTS

GARST BROS. DAIRY INC.

DIAL 5501

GRADE A MILK
HOMOGENIZED MILK (Natural Vitamin D added)
GOLDEN GUERNSEY MILK
GOLDEN FLAKE BUTTERMILK
SKIM MILK—COFFEE CREAM
WHIPPING CREAM—COTTAGE CHEESE
DARI-RICH CHOCOLATE MILK
GARST BROS. DAIRY BUTTER

"ROANOKE'S MOST MODERN DAIRY"

LABORATORY CONTROL
FOR YOUR PROTECTION

DIAL 5502

CONTENTS
(Continued)

Public Health ---- 413
Mental Health ---- 415
Book Announcements ---- 418
Woman's Auxiliary ---- 420
Program—The Medical Society of Virginia ---- 421
President's Message ---- 430
Editorial ---- 431
News ---- 432
Obituaries ---- 434

INDEX TO ADVERTISERS—Page 4

Entered as Second Class Matter at the Postoffice, Richmond, Va.

KNOX Protein Previews





New Study Shows Gelatine
Restores Brittle Fingernails to Normal

Directions for making the Knox Gelatine drink in every package



Brittle, fragile or laminating fingernails are the bane of many a woman's existence. Yet this highly prevalent and distressing condition often has gone uncontrolled for lack of effective therapy. Now, you can promise these patients substantial relief in a large percentage of cases.

In a recent study[1] that confirmed previous work[2] Knox Gelatine was used to treat 36 women with fragile, brittle, laminating fingernails. The response was most gratifying. Except for three patients who discontinued the therapy, three diabetics, and two women who had congenital deformities, the splitting ceased and all other patients were able to manicure their nails to a full point by the time the study ended.

Optimal dosage proved to be one envelope (7 grams) of Knox Gelatine administered daily for three months. Improvement, however, was noted after the first month. If you would like more complete details of this work, just use the coupon.

1. Rosenberg, S. and Oster, K. A., "Gelatine in the Treatment of Brittle Nails," *Conn. State Med. J.* **19**:171-179, March 1955.
2. Tyson, T. L., *J. Invest. Dermat.* **14**:323, May 1950.

Chas. B. Knox Gelatine Company, Inc.
Professional Service Dept. SJ-9
Johnstown, N. Y.

Please send me a reprint of the article by Rosenberg and Oster with illustrated color brochure.

YOUR NAME AND ADDRESS

1950	1952	1954	1955
Cortone®	Hydrocortone®	'Alflorone'	Deltra®

the delta$_1$ analogue of hydrocortisone

'Hydeltra' tablets

(Prednisolone, Merck)

2.5 mg.-5 mg.

(scored)

'Hydeltra'

Indications:

- RHEUMATOID ARTHRITIS
- BRONCHIAL ASTHMA
- INFLAMMATORY SKIN CONDITIONS

'Hydeltra' offers increased clinical effectiveness . . . lowers the incidence of untoward hormonal effects.

'Hydeltra' is supplied as 2.5 mg. and 5 mg. scored tablets in bottles of 30 and 100.

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

HYDELTRA is the trade-mark of Merck & Co., Inc. for its brand of prednisolone, supplied through Sharp & Dohme, Division of Merck & Co., Inc.



1st

In Every Neighborhood

8 Branches In Richmond

FIRST AND MERCHANTS
NATIONAL BANK OF RICHMOND

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

specify

LEDERLE
POLIOMYELITIS IMMUNE GLOBULIN
(human)

Lederle

For the modification of measles and the prevention or attenuation of infectious hepatitis and poliomyelitis.

LEDERLE LABORATORIES DIVISION
AMERICAN Cyanamid COMPANY Pearl River, New York

...from Two Outstanding Cases

RED LABEL • BLACK LABEL
Both 86.8 Proof



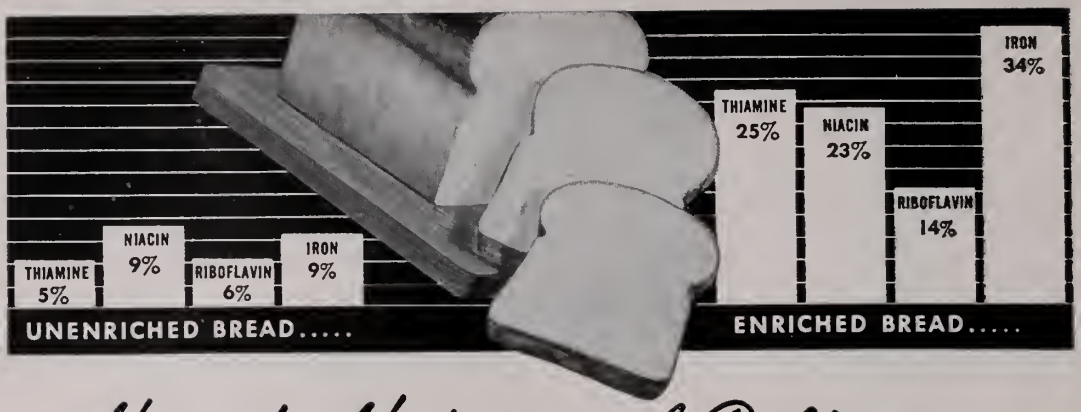
Johnnie Walker stands out in its devotion to quality. Every drop is made in Scotland. Every drop is distilled with the skill and care that come from generations of fine whisky-making. And every drop of Johnnie Walker is guarded all the way to give you *perfect* Scotch whisky... the same high quality the world over.



BORN 1820...
STILL GOING STRONG

JOHNNIE WALKER
BLENDED SCOTCH WHISKY

CANADA DRY GINGER ALE, Inc., New York, N. Y., *Sole Importer*



Note the Nutritional Difference

THE superior nutritive value of enriched bread over unenriched bread is emphasized by analytical data recently published by the United States Department of Agriculture.[1] Comparison of the two kinds of bread indicates how much more effectively enriched bread contributes to nutritional needs.

Since enriched breads represent an estimated 85 per cent of all commercially produced bread, the evidence shows that bread enrichment has notably increased the B vitamin and iron intake of our population. For this reason enriched bread, since 1941 (when it was first marketed), has been a valuable aid in reducing the incidence of attributable deficiency diseases.[3,4]

But enriched bread contributes to good nutrition in other ways, too. The 13 grams of protein supplied by 5½ ounces (estimated average daily consumption) aids notably in the satisfaction of the daily protein requirement. Since virtually all enriched bread today contains substantial amounts of nonfat milk solids, its protein —consisting of flour and milk proteins—is biologically effective for growth as well as tissue maintenance.

Because of its high nutrient value, its easy and almost complete digestibility, and its universally accepted pleasant, bland taste, enriched bread merits a prominent place not only in the general diet, but in special diets as well. In many reducing diets 3 or more slices daily are included. The average slice of machine-sliced enriched bread supplies only 63 calories.

At notably low cost, enriched bread is making a valuable contribution to the nutritional health of the American people.

1. Watt, B.K., and Merrill, A.L.: Composition of Foods—Raw, Processed, Prepared, United States Department of Agriculture, Agricultural Handbook no. 8, 1950.
2. Data furnished by the Laboratories of The American Institute of Baking, Chicago, Illinois.
3. Sebrell, W.H., Jr.: Trends and Needs in Nutrition, J.A.M.A. *152*:42 (May 2) 1953.
4. Flour and Bread Enrichment, 1949-50, The Committee on Cereals, Food and Nutrition Board, National Research Council, 1950.

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

B VITAMIN AND IRON CONTRIBUTION OF 5½ OUNCES* OF ENRICHED AND UNENRICHED BREADS AND PERCENTAGES OF RECOMMENDED DAILY ALLOWANCES**

	ENRICHED BREAD		UNENRICHED BREAD (of former years)	
	Amounts	Percentages of Recommended Daily Allowances	Amounts	Percentages of Recommended Daily Allowances
THIAMINE	0.37 mg.	25%	0.08 mg.	5%
NIACIN	3.40 mg.	23%	1.40 mg.	9%
RIBOFLAVIN	0.23 mg.	14%	0.09 mg.	6%
IRON	4.10 mg.	34%	1.10 mg.	9%

*An estimated amount of bread consumed daily by the average person.
**Daily dietary allowances (1953) recommended by the National Research Council for a fairly active man 45 years of age, 67 inches in height, and weighing 143 pounds.

THE VIRGINIA BAKERS COUNCIL
In co-operation with
THE AMERICAN BAKERS ASSOCIATION

make your allergy Rx taste better

Chlor-Trimeton syrup q.s. ad

- taste appeals to young and old
- compatible with commonly prescribed medications

Contains CHLOR-*TRIMETON*® Maleate
(brand of chlorprophenpyridamine maleate), 2 mg. per teaspoonful (4 cc.).

Schering

CHLOR-*TRIMETON* SYRUP

SCHERING

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets

(PREDNISOLONE, MERCK) 2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

Complete
Printing and Binding Service

Commercial, Book and Job Work, Catalogues—Publications
Advertising Literature, Booklets—Broadsides
Office and Factory Forms
Loose-Leaf and Manifold Forms—Ledger Leaves and Loose-Leaf Binders
Paper Ruling
Complete Binding Equipment

Complete Service Under One Roof

Acquaint us with your requirements. We serve you efficiently and economically.

Dial 3-1881

WILLIAMS PRINTING CO.

11-13-15 North Fourteenth Street **RICHMOND, VIRGINIA**

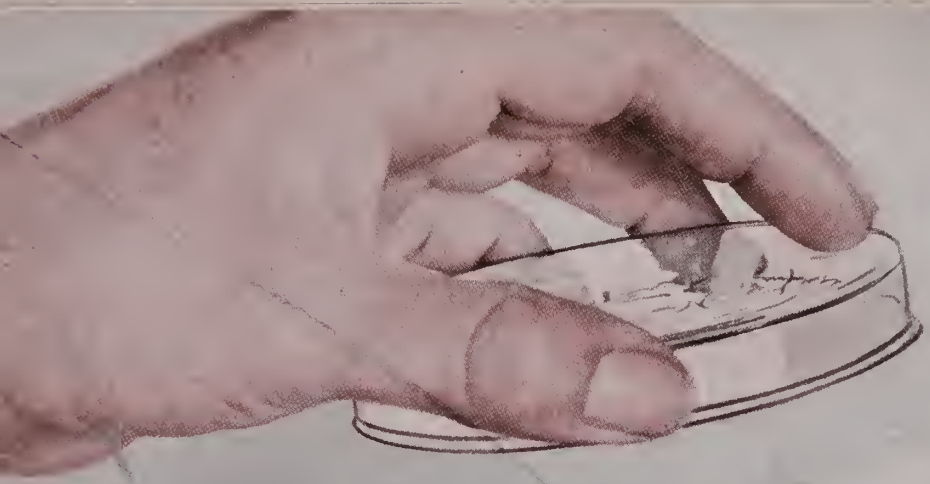
Home Medication . . .

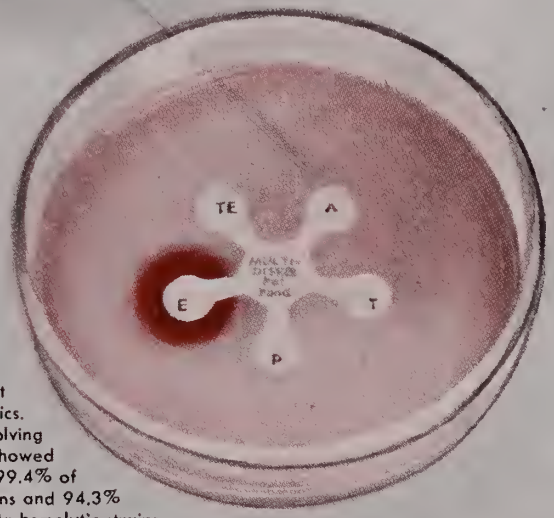
The direction circular included in all packages of Bayer Aspirin has recently been published in full pages in leading national magazines reaching well over seventy-five million. Quoted below is a prominent paragraph from these directions.

IMPORTANT NOTICE!

The dosages of Bayer Aspirin recommended in these directions are appropriate for the aches and pains that may be treated by home medication. If these dosages do not bring relief and the pain persists, it is an indication that this particular pain is of a nature that requires the attention of a physician. Under these conditions, don't experiment with any other home medications. Consult your physician. He is the only one qualified to diagnose the cause of the persistent pain and prescribe the remedy best suited to your individual needs. This is particularly true of continuing severe pains of Arthritis, Rheumatism, Sciatica, Bursitis and Neuritis.

THE BAYER COMPANY DIVISION
OF STERLING DRUG INC.
1450 BROADWAY, NEW YORK 18, N. Y.





DESTROYS ENTEROCOCCI

This blood agar plate shows a strain of *beta* hemolytic enterococcus. Note extreme sensitivity of this organism to ERYTHROCIN—yet it easily resists the other antibiotics. Additional data: A study[1] involving 202 enterococcic strains showed sensitivity to erythromycin in 99.4% of *alpha* hemolytic strains and 94.3% of *beta* hemolytic strains.

specific against coccic infections

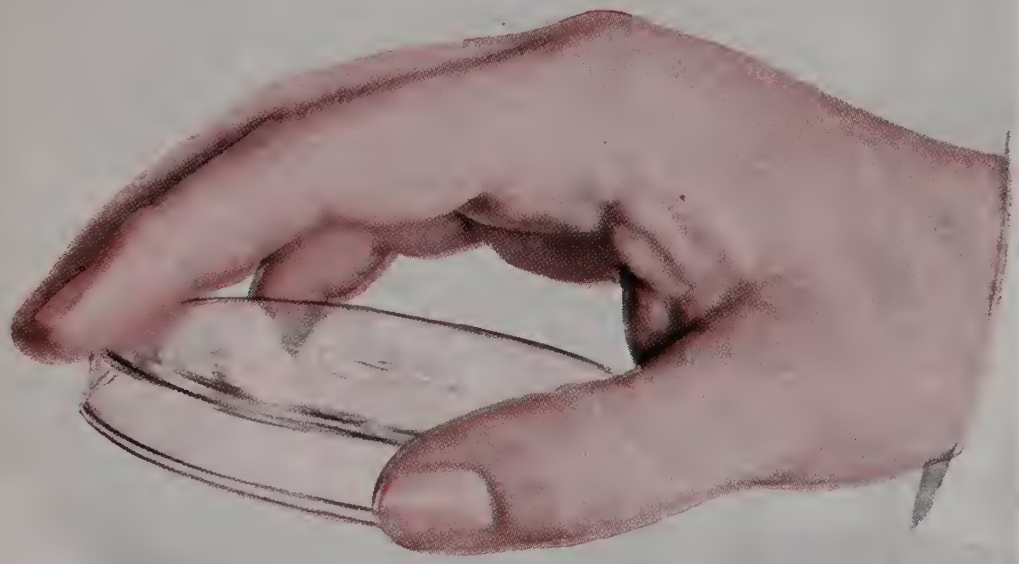
Now, you can prescribe *specific therapy* against staph-, strep- or pneumococci by simply writing *Filmtab* ERYTHROCIN Stearate. Since this coccic group causes most bacterial respiratory infections (and since these organisms are the very ones most sensitive to ERYTHROCIN) doesn't it make good sense to prescribe *Filmtab* ERYTHROCIN when the infection is coccic?

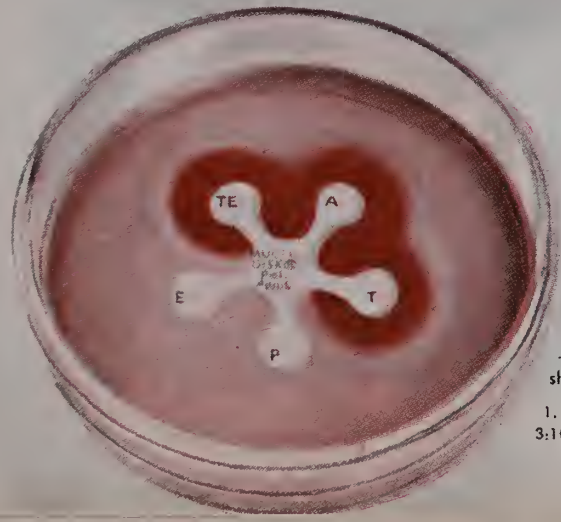
filmtab®

Erythrocin®

(Erythromycin Stearate, Abbott)

STEARATE





SPARES

INTESTINAL FLORA

This sensitivity test shows ERYTHROCIN and the same antibiotics against a typical intestinal strain of *E. coli*. Note that ERYTHROCIN and penicillin do not affect this gram-negative organism—although the other antibiotics show marked inhibitory action.

1. Eisenberg, et al., Antib. & Chemo., 3:1026-1028, Oct., 1953.

with little risk of serious side effects

Since ERYTHROCIN is inactive against gram-negative organisms, it is less likely to alter intestinal flora—with an accompanying low incidence of side effects. Also, your patients seldom get the allergic reactions sometimes seen with penicillin. Or loss of accessory vitamins during ERYTHROCIN therapy. *Filmtab* ERYTHROCIN Stearate (100 and 250 mg.) is supplied in bottles of 25 and 100 at pharmacies everywhere. Abbott

filmtab®

Erythrocin®

(Erythromycin Stearate, Abbott)

STEARATE

® Filmtab—Film scaled tablets; patent applied for.

509183

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

The American Way

is peace, prosperity, and goodwill toward our fellow man—to invest our time in educating and learning; and our money in good citizens and fine institutions.



One of the finest institutions of your State is Richmond Hotels Incorporated, one that maintains the highest modern hotel standards . . . one that combines the hospitality and charm of the old and the convenience and comfort of the new.

John Marshall William Byrd
King Carter Richmond

Richmond Hotels Incorporated

For the
Discriminating
Eye Physician

Depend on the Services of a Guild Optician

in
Lynchburg, Virginia

A. G. JEFFERSON

Ground Floor **Allied Arts Bldg.**

Exlusively Optical

Results With

'ANTEPAR'®*

against **PINWORMS**

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against **ROUNDWORMS**

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

THE NEW YORK POLYCLINIC
MEDICAL SCHOOL AND HOSPITAL

(Organized 1881)

(The Pioneer Post-Graduate Medical Institute in America)

OBSTETRICS and GYNECOLOGY

A two months full time course. In Obstetrics: lectures, prenatal clinics; attending normal and operative deliveries; detailed instruction in operative obstetrics (manikin). X-ray diagnosis in obstetrics and gynecology. Care of the newborn. In Gynecology: lectures; touch clinics; witnessing operations; examination of patients pre-operatively; follow-up in wards post-operatively. Obstetrical and gynecological pathology. Culdoscopy. Studies in Sterility. Anesthesiology. Attendance at conferences in obstetrics and gynecology. Operative gynecology on the cadaver.

PHYSICAL MEDICINE AND REHABILITATION

Didactic lectures and active clinical application of all present-day methods of physical medicine in internal medicine, general and traumatic surgery, gynecology, urology, dermatology, neurology and pediatrics. Special demonstrations in minor electrosurgery and electrodiagnosis. The diagnostic tests used in Physical Medicine. Technics in rehabilitation of the seriously disabled.

PROCTOLOGY AND GASTROENTEROLOGY

A combined course comprising attendance at clinics and lectures; instruction in examination, diagnosis and treatment; pathology, radiology, anatomy, operative proctology on the cadaver, anesthesiology, witnessing of operations, examination of patients preoperatively and postoperatively in the wards and clinics; attendance at departmental and general conferences.

ANATOMY — SURGICAL

a. ANATOMY COURSE for those interested in preparing for Surgical Board Examination. This includes lectures and demonstrations together with supervised dissection on the cadaver.
b. SURGICAL ANATOMY for those interested in a general Refresher Course. This includes lectures with demonstrations on the dissected cadaver. Practical anatomical application is emphasized.
c. OPERATIVE SURGERY (cadaver). Lectures on applied anatomy and surgical technic of operative procedures on cadaver under supervision.
d. REGIONAL ANATOMY for those interested in preparing for Subspecialty Board Examinations.

For Information concerning these and other Courses please Address:

THE DEAN, 345 West 50th St., New York 19. N. Y.

1950 Cortone® | 1952 Hydrocortone®

1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets

(PREDNISOLONE, MERCK)

2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

Indications: *Rheumatoid arthritis*

Bronchial asthma

Inflammatory skin conditions

SHARP & DOHME

Philadelphia 1, Pa.

DIVISION OF MERCK & CO., INC.



A prescription for happy travel . . .



Practically all of your patients, young and old are motion sensitive and suffer to some degree when traveling by rail, bus, automobile, ship or plane. Bonamine easily and effectively prevents motion sickness. A single dose a day often is enough to insure the pleasure and therapeutic benefits of travel. The chewing-gum form has the advantages of patient acceptability, agreeable minty taste and ready availability without need for water for administration.

Bonamine is indicated also for the control of nausea, vomiting and vertigo associated with labyrinthine irritation due to Menière's disease, cerebral arteriosclerosis or radiation therapy.

*Trademark

Bonamine* HCl

Brand of meclizine hydrochloride

Supplied *as Chewing Tablets, 25 mg. and also as scored, tasteless Tablets, 25 mg.*

Pfizer

PFIZER LABORATORIES, Brooklyn 6, N. Y.
Division, Chas. Pfizer & Co., Inc.

Meat...

and Biologic Facts of Protein Metabolism

The classical work of Cannon and his associates* in the field of protein metabolism has contributed significantly to our knowledge of the biologic utilization of protein. It has established that the dietary absence of a single amino acid quickly changes the direction of metabolic activity from anabolism to catabolism. Apparently all the nonessential amino acids play some part in sparing the essential amino acids, and all may be regarded as indispensable for optimal nutrition. It has been suggested "that for maximal tissue-utilization of amino acids at least twenty per cent of the total dietary nitrogen should come from other sources than essential amino acids."

In undernourished subjects the maintenance requirement for each essential amino acid is much greater—two to almost five times greater—than in healthy subjects.

Although an optimal caloric intake facilitates optimal utilization of amino acids, a reducing regimen need not curtail full utilization of these nutrients. It has been shown that a useful degree of amino acid utilization can be attained with caloric intake considerably below the optimal.

Minerals appear to be important in the process of amino acid metabolism. Evidence indicates that either phosphate or potassium deficiency might adversely influence amino acid utilization. Absence of either ion from experimental depletion rations leads to depression of appetite and slowing of the processes of protein repletion.

B complex vitamins also affect the metabolism of proteins and amino acids. For example, rats fed a high protein diet require a high intake of B complex vitamins in order to maintain normal growth rates. Omission from the ration of any one of these vitamins (riboflavin, thiamine, pyridoxine, or pantothenate) is accompanied, in varying degrees, by lower food consumption and slower weight gain.

Meat of all cuts and kinds is high in its content of protein, and provides well proportioned amounts of essential and nonessential amino acids. Meat also supplies valuable amounts of essential minerals, especially iron, phosphorus, potassium and magnesium, as well as important quantities of all components of the vitamin B complex, thus assuring maximal utilization of the amino acid components.

---

*Cannon, P. R.; Frazier, L. E., and Hughes, R. H.: Factors Influencing Amino Acid Utilization in Tissue Protein Synthesis, in Symposium on Protein Metabolism, New York, The National Vitamin Foundation, Inc., 1954, pp. 55-90.

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

American Meat Institute

Main Office, Chicago . . . Members Throughout the United States



Whenever the diet is faulty, the appetite poor, or the loss of food is excessive

through vomiting or diarrhea—

Valentine's
MEAT EXTRACT

stimulates the appetite,

increases the flow of digestive juices,

provides: supplementary amounts of vitamins, minerals and soluble proteins,

extra-dietary vitamin B_{12},

protective quantities of potassium, in a palatable and readily assimilated form.

Supplied in bottles of 2 or 6 fluidounces.

***Dosage** is 1 teaspoonful two or three times daily; two or three times this amount for potassium therapy.*

VALENTINE Company, Inc.
RICHMOND 9, VIRGINIA

proof of performance shown by proof of preference



Sealy's Accepted Posturepedic Mattress now*

WORLD'S LARGEST SELLING POSTUREPEDIC MATTRESS

To patients suffering from morning backache due to sleeping on an inferior mattress or improperly fitted bedboards, you may suggest the Sealy Posturepedic, with confidence.

*Accepted for advertising in the Journal of the American Medical Association, Sealy's Posturepedic is now the most widely used mattress of its type in the world. Since it is correctly *firm* it insures proper sleeping posture, gives natural support and complete comfort, too. For patients bothered by "low" morning backache, possibly caused by sleeping on a flabby mattress or make-shift bedboard, you may mention the Sealy Posturepedic *knowing* it is giving helpful relief in steadily increasing thousands of cases.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Sealy

SLEEPING ON A *SEALY* IS LIKE SLEEPING ON A CLOUD

SEALY MATTRESS COMPANY
Railroad Avenue, Bluefield, Va.
8 South Harvie Street, Richmond, Va.

brand new!

arlidin

helps your peripheral vascular patients



"strong muscle vasodilator activity and an adequate increase in cardiac output"[1]

in intermittent claudication
diabetic vascular disease
Raynaud's disease
thromboangiitis obliterans
ischemic ulcers
night leg cramps

arlidin* HCl
brand of nylidrin hydrochloride
tablets **6 mg.**
dose: 1 tablet t.i.d. or q.i.d.
bottles of 50, 100 and 1000.
*Trade Mark



vasorelaxation
more tissue oxygen
improved muscle metabolism
pain relief
well tolerated • rapid • sustained

walk longer, further, in more comfort



ARLIDIN dilates peripheral blood vessels in distressed muscles, relaxes spasm, increases both cardiac and peripheral blood flow . . . to send more blood where more blood is needed.

effective "vasodilative agent of minimal toxicity and optimal tolerance"[2]

1. Pomeranze, J. et al.: Angiology, June, 1955.
2. Freedman, L.: Angiology 6:52, Feb. 1955.

Write for samples and literature

arlington-funk laboratories
division of U. S. VITAMIN CORPORATION
250 E. 43rd St., New York 17, N.Y.

Protected by U. S. Pat. No. 2,661,372 and 2,661,373

Income* for the members of the Virginia Medical Profession from the first day* of sickness or injury...

NOW! Not for only 26 weeks
— Not for only 52 weeks

but even for your entire lifetime

House Confinement not required at any time

Accidental loss of hand, feet or eyesight pays monthly benefits — not just a lump sum

TAX FREE DOLLARS — Disability insurance income is not taxable. For example, $3600 disability insurance income is equivalent to about $5000 regular income

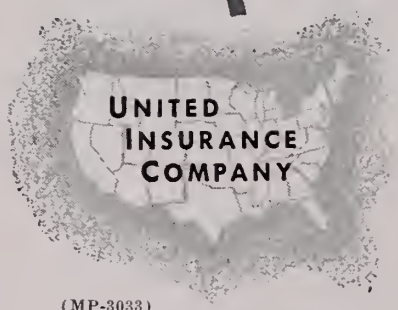
EXTRA BENEFITS — Double monthly benefits while you are hospitalized payable for as long as three months

Cash benefits for accidental death

Double income benefits if disabled in specified travel accident named in the policy

OTHER IMPORTANT FEATURES — Waiver of Premium Provision • Limited Commercial Air Line Passenger Coverage • No Automatic Termination Age During Policy Period • A Special Renewal Agreement

Covers most occidents from dote of policy and most sickness originoting more than 30 doys after dote of policy, excepting those incurred while in militory service of ony country ot war, or resulting from war, ony oct of wor, suicide, attempted suicide, insonity, mentol diseose, certain foreign trovel, any pre-existing condition or ony hozord of oviotion other thon commerciol air line passenger trovel



(MP-3033)

UNITED INSURANCE COMPANY, Lifetime Disability Income Dept.
Eig Building, Silver Spring, Maryland

I would like more information about your lifetime disability income protection

I understand I shall not be obligated

Name ..... Age .....

Address .....
or attach letterhead

***Income payable from first day of medical attention and as long as continuous total disability, total loss of time and medical attendance continue**

Mail coupon today while you are still healthy

Upjohn

Ulcer protection that lasts all night:

Pamine*
BROMIDE

Tablets

Each tablet contains:
Methscopolamine bromide ..... 2.5 mg.

Average dosage (ulcer):
One tablet one-half hour before meals, and 1 to 2 tablets at bedtime.

Supplied:
Bottles of 100 and 500 tablets

Syrup

Each 5 cc. (approx. 1 tsp.) contains:
Methscopolamine bromide ..... 1.25 mg.

Dosage:
1 to 2 teaspoonfuls three or four times daily.

Supplied:
Bottles of 4 fluidounces

*TRADEMARK, REG. U. S. PAT. OFF.—THE UPJOHN BRAND OF METHSCOPOLAMINE

The Upjohn Company, Kalamazoo, Michigan

in arthritis
and
allied disorders...



nonhormonal anti-arthritic

BUTAZOLIDIN®

(brand of phenylbutazone)

relieves pain • improves function • resolves inflammation

Employing the serum protein-polysaccharide ratio (PR) as an objective criterion of rheumatoid activity, it has again been shown that BUTAZOLIDIN "...produces more than a simple analgesic effect in rheumatoid arthritis."[1]

Clinically, the potency of BUTAZOLIDIN is reflected in the finding that 57.6 per cent of patients with rheumatoid arthritis respond to the extent of "remission" or "major improvement."[2]

Long-term study has now shown that the failure rate with BUTAZOLIDIN in rheumatoid arthritis, and particularly in rheumatoid spondylitis, is significantly lower than with hormonal therapy.[3]

(1) Payne, R. W.; Shetlar, M. R.; Farr, C. H.; Hellbaum, A. A., and Ishmael, W. K.: J. Lab. & Clin. Med. *45*:331, 1955. (2) Bunim, J. J.; Williams, R. R., and Black, R. L.: J. Chron. Dis. *1*:168, 1955. (3) Holbrook, W. P.: M. Clin. North America *39*:405, 1955.

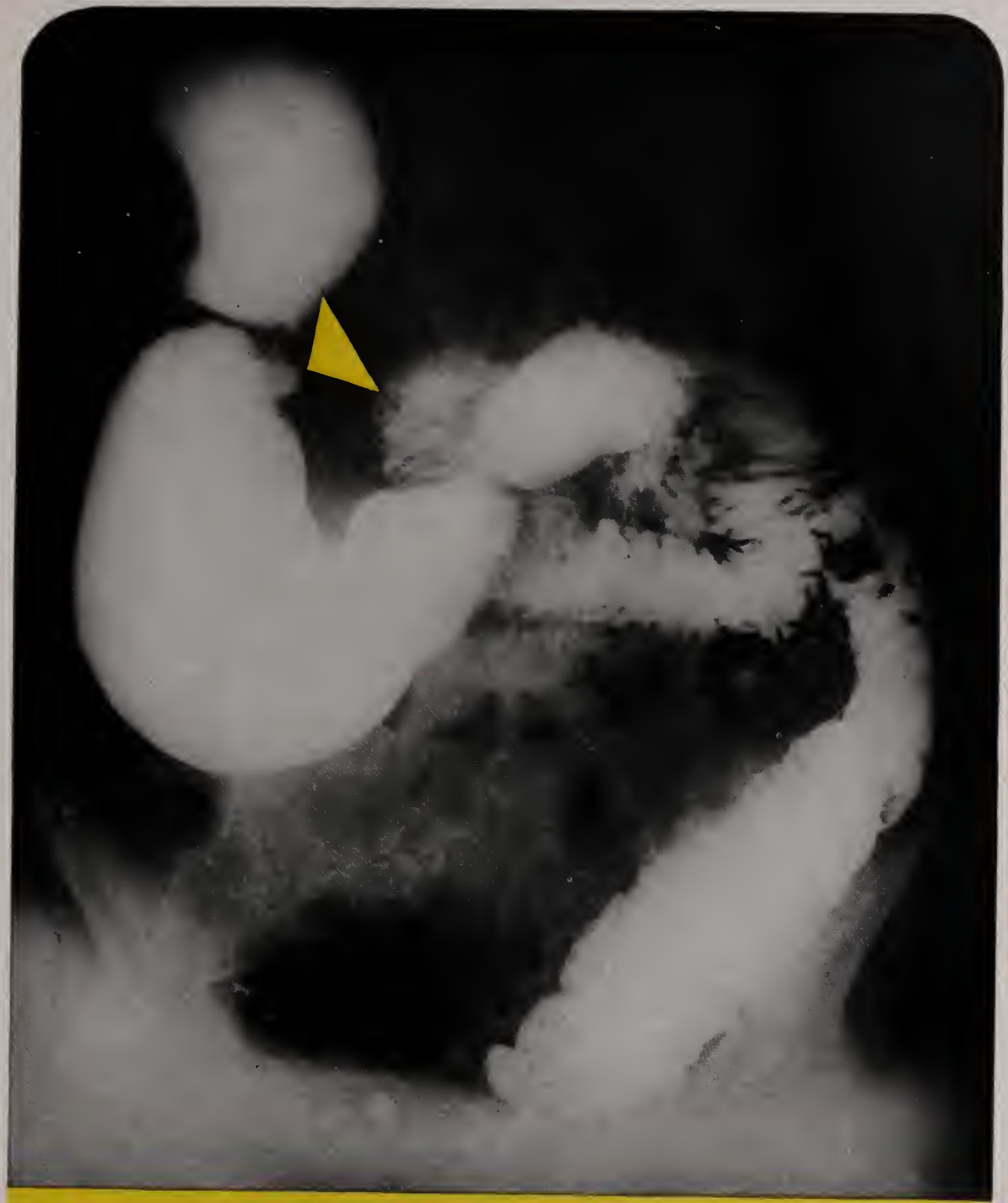
BUTAZOLIDIN® (brand of phenylbutazone). Red coated tablets of 100 mg.

BUTAZOLIDIN being a potent therapeutic agent, physicians unfamiliar with its use are urged to send for literature before instituting therapy.

GEIGY PHARMACEUTICALS Division of Geigy Chemical Corporation
220 Church Street, New York 13, N. Y.
In Canada: Geigy Pharmaceuticals, Montreal

Geigy

81155



DOUBLE-GEL ACTION

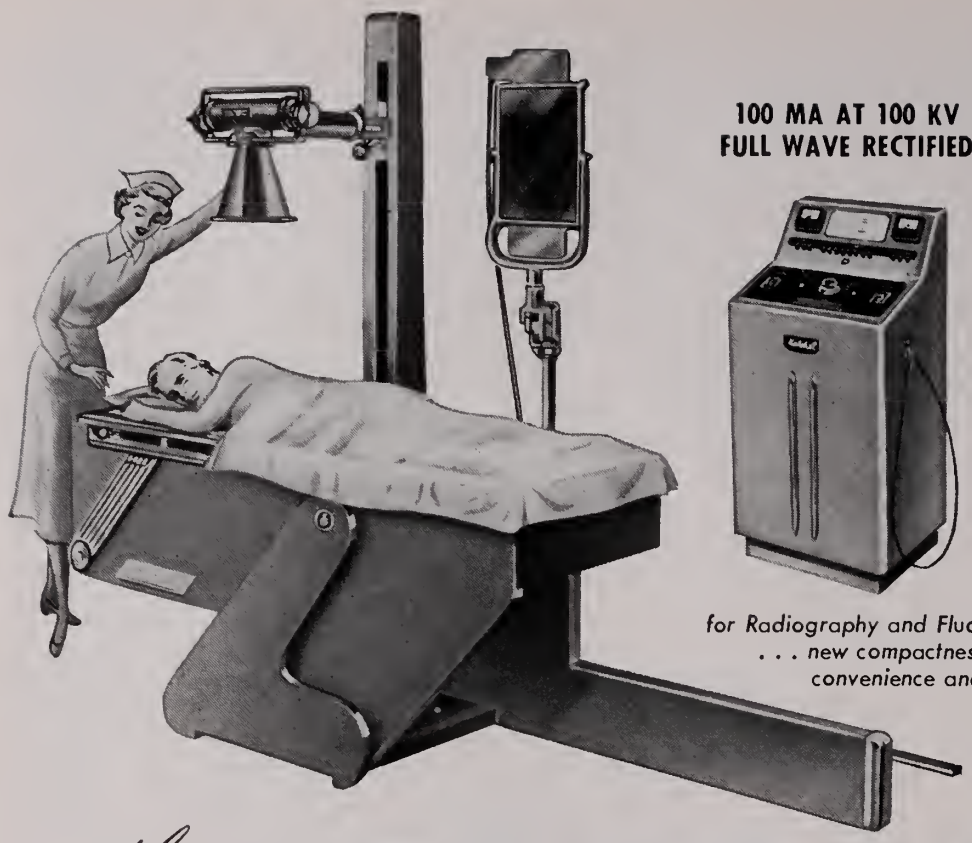
IN TREATMENT OF PEPTIC-ULCER PATIENTS

Protective demulcent gel Anticorrosive antacid gel

AMPHOJEL®

Aluminum Hydroxide Gel

Wyeth®
Philadelphia 2, Pa.



100 MA AT 100 KV
FULL WAVE RECTIFIED

for Radiography and Fluoroscopy
. . . new compactness, automatic convenience and complete safety!

the new KELESCOPE
X-ray combination . . .

ESPECIALLY DESIGNED BY KELEKET FOR MAXIMUM ECONOMY

Eagerly accepted by the profession, the New Kelescope precisely fits your X-ray requirements. It is full size, yet can be used in an 8 x 10 office. It simplifies radiography to two quick, easy steps, gives fine detail visualization for fluoroscopy.

Radiography, for example, is as simple as this:

1. Check patient for thickness of body part.
2. Turn kilovolt knob to desired centimeter thickness. Check chart for milliampere seconds to be used and press button for automatic operation.

Kelley-Koett
The Oldest Name in X-Ray

Write for free informative literature today

KELEKET X-RAY CORPORATION

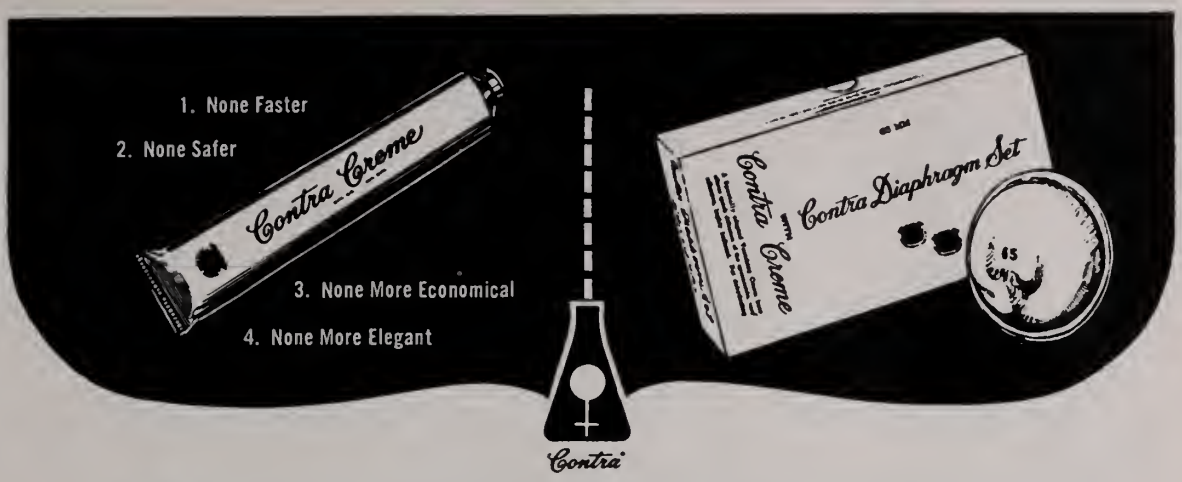
228-9 West Fourth Street • Covington, Kentucky

Call your local factory representative direct for Sales and Service

KELEKET X-RAY CORP.
Richmond, Va.
1303 Summit Ave.
Tel.: 84-4526

KELEKET X-RAY CORP.
4321 Harford Road
Baltimore 14, Md.

KELEKET X-RAY CORP.
226 Massachusetts Ave.
Washington 2, D.C.
Tel.: Nat'l. 8-4049



When conception is contraindicated

use Contra® Creme

First AMA accepted phenyl mercuric acetate contraceptive[1]. CONTRA CREME provides more of the active... most spermicidal substance known[2] ... phenyl mercuric acetate 0.06% than any other Council Accepted product. CONTRA CREME kills spermatozoa the fastest time recognized by the AMA. This has been consistently shown throughout the years to be from 2 to 5 minutes by the Brown and Gamble technique.[3,4,5,6,7,8]

and Contra® diaphragms

The DIAPHRAGM with a two year warranteed guarantee against deterioration and defects. Upon the purchase of any CONTRA DIAPHRAGM a warranteed card is given for two years of normal wear when used with CONTRA CREME. Evidence of harmlessness and efficacy have been furnished by competent medical investigators specializing in gynecology and obstetrics demonstrating long shelf life and use life.

REFERENCES:

1. James, W. F. B.: A Study Of A Simple Contraceptive Method For Clinic And Private Patients. West, J. Surg. Gyn & Ob., 59: 197, 1952. 2. Baker, J. R., Ranson, R. M. and Tynen, J.: A New Chemical Contraceptive, Lancet, P 882,, Oct. 15, 1938. 3. Report To The Council On Pharmacy And Chemistry Of The AMA: JAMA 148: 50, 1952. 4. Gamble, C. J. and Brown, R. L.: Relative Spermacidal Times of Commercial Contraceptives, Scientific Exhibit AMA Meeting, June, 1941. 5. Brown, R. L., Levenstein, I. and Becker, B.: The Spermacidal Times of Samples of Commercial Contraceptives Secured in 1942, Human Fertility 8: 65, 1943. 6. Becker, B. and Gamble, C. J.,: The Spermacidal Times of Samples of Contraceptives Secured in 1943, Human Fertility 9: 6, 1944. 7. Ibid: The Spermacidal Times of Contraceptive Jellies and Creams Secured in 1946, 11: 111, 1946. 8. New and Non Official Remedies, 1946.

For your own office prescription needs, use convenient order form below.

ORDER FORM

Contra Company 13 West 46th Street, New York 36, N. Y.

Please enter my order as follows: Date_____

Contra Diaphragm Sets Sizes 50mm thru 95mm (Specify sizes)

Size_____ Quantity_____ $18.00 per dozen

Contra Creme B (without applicator) Quantity_____ 9.00 per dozen

Contra Creme A (with applicator) Quantity_____ 10.80 per dozen

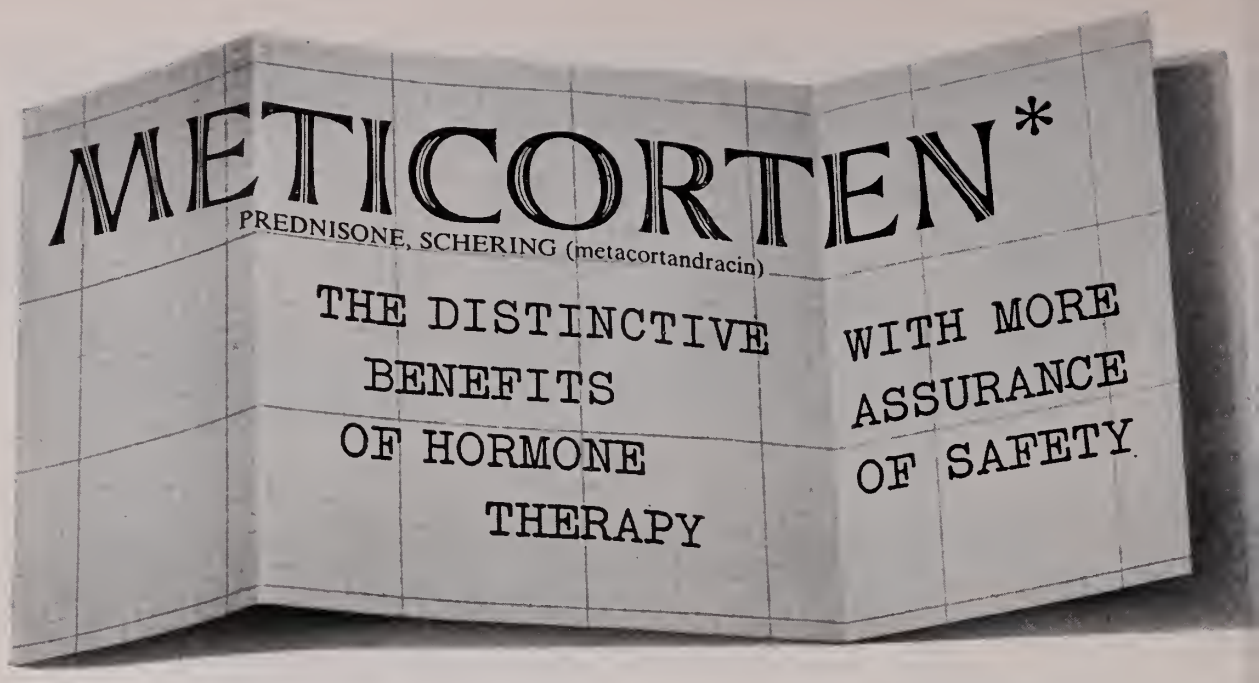
Contra Inserters (plastic) Quantity_____ 7.20 per dozen

Shipped prepaid in quantities of 3 or more. Check with order less 2%. Open Account_____

Signed_____ M. D.

Address_____

Please stock my druggist whose name and address follows:



For physicians who hesitate to use the older corticosteroids because of diminishing therapeutic returns and frequently predominating major undesirable side effects, METICORTEN with its high therapeutic ratio reduces the incidence of certain major undesirable side effects.

- minimizes sodium and water retention
- minimizes weight gain due to edema
- no excessive potassium depletion
- in rheumatoid arthritis, effective relief of pain, swelling, tenderness; diminishes joint stiffness
- in intractable asthma, relief of bronchospasm, dyspnea, cough; increases vital capacity
- clinical response even where cortisone or hydrocortisone ceases to be effective—"cortisone escape"
- effective in smaller dosage

BIBLIOGRAPHY

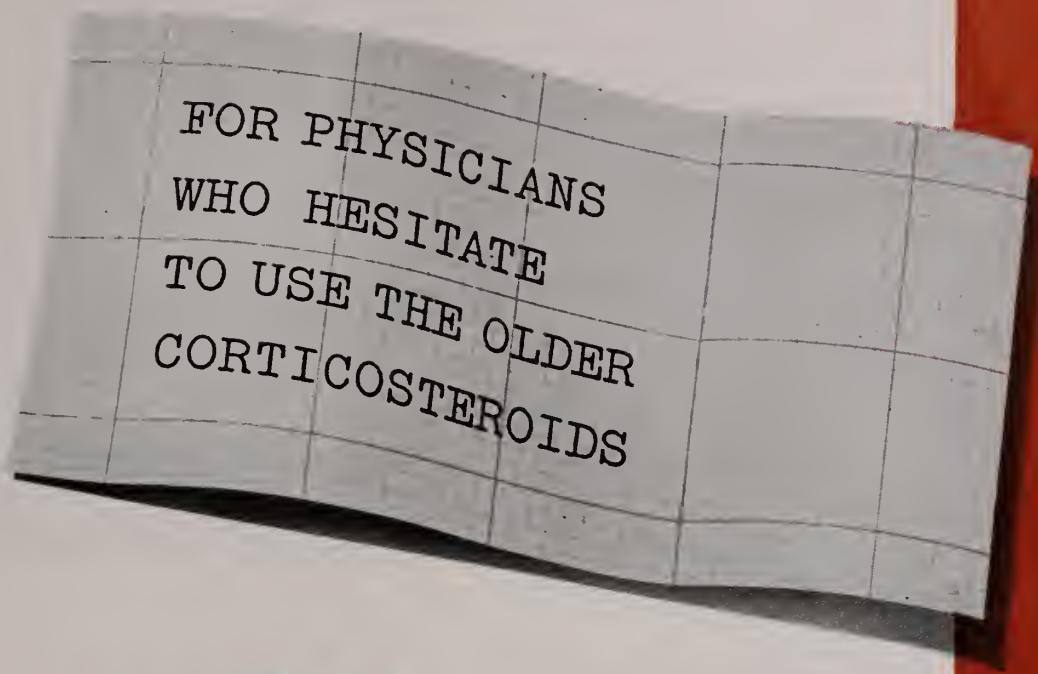
(1) Bunim, J. J.; Pechet, M. M., and Bollet, A. J.: J.A.M.A. *157*:311, 1955. (2) Gray, J. W., and Merrick, E. Z.: J. Am. Geriat. Soc. *3*:337, 1955. (3) Boland, E. W.: California Med. *82*:65, 1955. (4) Dordick, J. R., and Gluck, E. J.: J.A.M.A. *158*:166, 1955. (5) Margolis, H. M., and others: J.A.M.A. *158*:454, 1955. (6) Hollander, J. L.: Philadelphia Med. *50*:1357, 1955. (7) Barach, A. L.; Bickerman, H. A., and Beck, G. J.: Dis. Chest *27*:515, 1955. (8) Arbesman, C. E., and Ehrenreich, R. J.: J. Allergy *26*:189, 1955. (9) Skaggs, J. T.; Bernstein, J., and Cooke, R. A.: J. Allergy *26*:201, 1955. (10) Schwartz, E.: J. Allergy *26*:206, 1955. (11) Nelson, C. T.: J. Invest. Dermat. *24*:377, 1955. (12) Robinson, H. M., Jr.: J.A.M.A. *158*:473, 1955. (13) Herzog, H. L., and others: Science *121*:176, 1955. (14) Perlman, P. L., and Tolksdorf, S.: Fed. Proc. *14*:377, 1955. (15) King, J. H., and Weimer, J. R.: Experimental and clinical studies on Meticorten (prednisone) and Meticortelone (prednisolone) in ophthalmology, A.M.A. Arch. Ophth., in press. (16) Barach, A. L.; Bickerman, H. A., and Beck, G. J.: Clinical and physiological studies on the use of metacortandracin in respiratory disease. II. Pulmonary emphysema and pulmonary fibrosis, Dis. Chest, to be published. (17) Dordick, J. R., and Gluck, E. J.: Preliminary clinical trials with prednisone (Meticorten) in systemic lupus erythematosus, A.M.A. Arch. Dermat. & Syph., in press. (18) Goldman, L.; Flatt, R., and Baskett, J.: Assay technics for local anti-inflammatory activity in the skin of man with prednisone (Meticorten) and prednisolone (Meticortelone), J. Invest. Dermat., in press.

METICORTEN,* brand of prednisone.
*T.M.

in

rheumatoid arthritis,

intractable asthma, rheumatic fever, nephrosis, certain skin disorders such as acute disseminated lupus erythematosus, acute pemphigus, extensive atopic dermatitis and other allergic dermatoses, and certain eye disorders



METICORTEN

PREDNISONE, SCHERING (metacortandracin)

SCHERING CORPORATION BLOOMFIELD, NEW JERSEY

Schering

MC-J-520

prevents postpartum hemorrhage
speeds uterine involution



'Ergotrate Maleate'

(ERGONOVINE MALEATE, U.S.P., LILLY)

. . . produces rapid and sustained contraction of the postpartum uterus

The administration of 'Ergotrate Maleate' almost completely eliminates the incidence of postpartum hemorrhage due to uterine atony. Administered during the puerperium, 'Ergotrate Maleate' increases the rate, extent, and regularity of uterine involution; decreases the amount and sanguineous character of the lochia; and decreases puerperal morbidity due to uterine infection.

Supplied:

Ampoules of 0.2 mg. in 1 cc.
Tablets of 0.2 mg.

Dosage: Generally, 0.2 to 0.4 mg. I.V. or I.M. immediately following delivery of placenta. Thereafter, 0.2 to 0.4 mg. three or four times daily for two weeks.

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.

The Virginia
MEDICAL
MONTHLY

September, 1955
Vol. 82, No. 9
Whole No. 1239

A Few Remarks on Services for Crippled Children

A. R. SHANDS, JR., M.D.
Wilmington, Delaware

FIRST, I wish to say how deeply I appreciate the honor of being asked to participate in this ceremony—the dedication of your chapel-auditorium.

We of the Nemours Foundation will always feel deeply indebted to your institution for the many profitable ideas we received in our planning years from your building and from your first surgeon-in-chief, Dr. William Tate Graham, who served on our Medical Advisory Board from 1937 to 1953. Many of our present policies and plans were influenced and guided by his helpful suggestions and sound advice. When the Virginia program of our Foundation started in 1951, it was a great source of pleasure and gratification to Dr. Graham. He repeatedly said to me how pleased he was and how much our work in Virginia would mean to the crippled children of the state.* At this time I had many conferences with your second surgeon-in-chief, Dr. H. Page Mauck, in reference to the planning of our Virginia program. I feel as if the remarks of your speaker on this occasion should pay tribute and be largely devoted to the lives and accomplishments of these two distinguished surgeons who did so much for your institution and the development of the services for crippled children in the State of Virginia. Emerson once said, "An institution is but the lengthened shadow of one man." During the 27 years of the life of your hospital, I am sure that a long shadow of one or the other of these two beloved doctors has been always with you. What they strived and worked for in association with the many devoted members of your lay boards represents what you have today. I know this beautiful addition to your hospital is but one of the many realities of their dreams.

Dr. Graham and Dr. Mauck were two great and true Christian physicians who both had strong religious convictions. Nothing could exemplify this more than the beautiful story told at Dr. Graham's funeral of little "Jimmie," whose last words were "I'm not afraid any more. God is like Dr. Graham." The work of the doctor and the work of the minister must go hand in hand. Where the work of one ends and the other begins can never be determined. Without a solid spiritual background and training many of our crippled children would be more handicapped for their life's work than they are with physical deformities.

Several years ago there was a little four-year old boy in the Alfred I. duPont Institute named "Stevie." He was born with multiple joint deformities and an extreme weakness in all muscles. What he lacked in physical body, however, he made up in mind. His intelligence was far ahead of his years; he was inquisitive, and was always asking questions. On one occasion, in the bed next to him, a nurse was dressing a little baby who had extra fingers and toes. "Stevie" repeatedly was asking the nurse questions. Finally, he said to her, pointing to one of these extra fingers, "What is that?" The nurse replied, "Stevie, God gave this little boy six fingers on each hand and six toes on each foot." "Stevie" scratched his little head and thought awhile and then he said to the nurse, "God didn't think, did he?" God does think, as we all know, but perhaps we do not think as much as we should before acting. So the moral of this story is "to think" and to ask ourselves repeatedly, are we thinking in our planning of institutions and programs for the crippled child. The building of your hospital certainly indicates that much thinking was done by your board and planning committee. This beautiful auditorium-chapel represents the most recent example of your wise planning and thinking and, particularly, the judicious thoughts of your kind and gracious donor, Mrs. Vose.

A. R. SHANDS, JR., M.D., *Medical Director, Alfred I. duPont Institute and The Nemours Foundation.*

An address delivered at the Dedication of the Vose Memorial Chapel-Auditorium of the Crippled Children's Hospital, Richmond, Virginia, April 4, 1955.

*From January 1, 1952, to December 31, 1954, the Nemours Foundation assisted wholly, or in part, with the care of 594 handicapped children in Virginia; 389 in hospitals and 205 in speech clinics. One hundred and thirty-seven (137) of these were patients in the Crippled Children's Hospital and were given 6,197 days of hospital care with a daily average census of six.

Received for publication April 19, 1955.

In the rehabilitation of the crippled child there are two major divisions of activity—one for the body, and one for the mind. For the body there is medical care; for the mind there is education—academic, vocational and religious. What could be more appropriate than to have a chapel in which the religious education can be given in an atmosphere of a religious setting. A hospital chapel of this type cannot help but bring the church into the lives of the children more successfully than it ever could be done otherwise. With its proper use it will give to these children a more lasting impression of what religion is and what the word of God means. Unfortunately, too few institutions have chapels. Your hospital is most fortunate to have had a Mrs. Vose, who has been so deeply interested in the spiritual training of the child that she has made this chapel possible.

What has always impressed me about the Crippled Children's Hospital has been the large number of devoted lay persons on your volunteer staff. Without this dedicated group the success you have had through the years would not be yours. Those of you who have labored hard for this hospital and have seen the children treated, improved and sent home so different from what they were when they arrived, must have the feeling that all of your efforts have been worthwhile and all costs have paid rich dividends in salvaged lives. You have seen independence replacing dependence, self-respect and confidence replacing uncertainty and insecurity, and hope and courage to face life and the future for a feeling of despondency and despair. The hundreds of well-adjusted handicapped children of Virginia, who have been given here their opportunity to make the most of their abilities, are the great rewards for your contributions of time, effort and money.

A crippled children's hospital has always been the first step in the establishment of a state program for the care of the handicapped. From this beginning, well-rounded services slowly develop. Your hospital, from its small beginning for polio patients in 1919, followed by the construction of this building in 1928, was undoubtedly the real beginning of Virginia's program. In the development of services for the handicapped, the following has usually been the order of the establishment of the various facilities and services:

1. A special hospital for children disabled with orthopædic and plastic surgery conditions.

2. A system of state clinics associated with the hospital or hospitals where children can be examined before and after hospitalization.

3. A program of special education in the school system with the first classes usually being held in the hospitals and convalescent homes.

4. Vocational rehabilitation services for the children as they reach sixteen years of age, followed by vocational placement and adjustment.

5. Services for speech and hearing, which often have been started and highly developed by a private agency.

6. Services for the cerebral palsy child.

7. Services for rheumatic fever, congenital heart conditions and epilepsy.

In the developing of these state services, the shortage of personnel soon has always become apparent. Hence, an early interest has been created in every state in personnel problems, usually first in physical therapy, occupational therapy, and speech therapy. The establishment of new schools or the expansion of the old schools for the training of therapists has soon taken place. As the state departments of public instruction have assumed their responsibilities in the education of the handicapped child, it has been necessary to establish long and short term courses for the teachers in special education. With the creation of better school facilities, it rapidly has become apparent that there is a need for better programs of mental health for the handicapped child. Extending the services of child guidance clinics and meetings of parents, teachers and other personnel to discuss the emotional aspects of the handicapped child, become necessities. Along with the programs for better mental health of the child with normal mentality has come in recent years a great wave of enthusiasm for helping the child with an abnormal or retarded mentality. The development of each individual service has varied from state to state due to the particular interest of the agencies and special lay groups in communities.

Never has there been more general interest in the problems of the handicapped child than there is today. Campaigns to raise funds for the helping of every type of crippling in childhood are always with us. It is rather interesting to note that, although we hear a great deal about government spending in the field of health, private spending for the care of the handicapped child has always more than doubled that of government spending. In 1954 the actual figures were approximately seventy million dollars from private sources and thirty million from government sources. The private agency has repeatedly created an awareness of a problem and indicated to the government where its responsibility lies. Our Foundation has been particularly interested in this type of program and we hope has contributed to the

improvement of a few state services through its fourteen conferences. As many of you know, approximately 25 unmet needs for Virginia were discussed at the first Nemours Foundation-Virginia Council on Health and Medical Care conference in 1951. Today many of these needs in Virginia are no longer real problems, thanks to the efforts of the various special groups interested in the handicapped child.

The pattern of crippling in children's institutions with orthopædic conditions is definitely changing. This is everywhere necessitating a review of services with the formulation of new plans for the future. Thirty years ago nearly 50% of the crippled children in our institutions were there because of infections of bones and joints, such as tuberculosis and osteomyelitis. Today we see practically no osteomyelitis and little tuberculosis. In 1925, 23% of all crippled children were diagnosed tuberculosis; in 1951, it was 1.3%. The rachitic deformities of bow legs and knock knees, which we used to see in large numbers, are now only occasionally observed. In 1951, these constituted 1%, whereas, in 1924, the per cent was 8. If the Salk vaccine proves to be the answer for poliomyelitis, which in 1950 was responsible for 22.4% of the crippled children in the hospitals, there will be many more empty beds in crippled children's institutions.

The big problem we have to face today in our programs for the handicapped is that of congenital malformations. It is my feeling that we are seeing more than ever before. In our institution in Wilmington, between 1950 and 1954, the per cent varied from 46 to 55. According to the Children's Bureau statistics in 1950, congenital malformations constituted nearly 30% of all crippling conditions in childhood. The questions are constantly arising at meetings, "What can we do about the congenital malformation?" and "What can be done to decrease the incidence?" There is definite experimental and clinical evidence that such things as dietary and vitamin deficiencies in the mother, the virus of German measles in the first twelve weeks of pregnancy, blood incompatibility between parents, unnecessary exposure to radiation and diabetes in the mother or father are factors in their causation. The most critical weeks of pregnancy are the first twelve when the formation of the baby is taking place. During and before this period there is little or no instruction concerning care and diet given to the young wife who wants a family. After her pregnancy has been diagnosed, she receives ample antenatal instruction. It is my feeling that there should be an intensive campaign of education for the girl expecting to be married and wanting to have children. At this time we in Delaware are in the first stages of planning a congenital malformation program for the state which will start with an accurate survey of the numbers and types of malformed children with information from the mothers concerning their pregnancies.

Statistics on congenital malformations are not too accurate. Perhaps the best we have at the present time have come from a study in the city of Philadelphia by Dr. Douglas P. Murphy of the University of Pennsylvania. This study showed that there is a congenital malformation in approximately one out of every 200 births. Once a mother has had a child with a congenital malformation, the possibility of her having a second child with a congenital malformation is one in eight. The possibility of this same malformation occurring in the second congenital malformed child is one in two. It has also been shown that once a mother has had a child with a congenital malformation, if she wishes to have more children, the sooner she has the subsequent pregnancies, the less is the possibility of there being another congenital malformed child. It has also been shown that the number of congenital malformations in older mothers is greater than in younger mothers. This type of statistical information, if properly presented and intelligently interpreted in the right places, undoubtedly might have a great deal to do in decreasing the number of congenital malformations.

One of the weaknesses in our present program in the care of the handicapped is the lack of adequate parent education. It has been said that the problem of the handicapped child is primarily the problem of the family, and that 80% of the child's rehabilitation is effected by the parents. It is my feeling that the part the parents play is the most significant single factor influencing the total rehabilitation of the handicapped child. What we as professional people do for the crippled child in reality is not as important in the total care of the child as what is done by parents and in the home. We can straighten crooked limbs, enable patients to walk who have never walked, strengthen muscles and do many other things toward the physical improvement of the child; but, if this medical care is not associated with the parents doing their part and with an acceptance of the child in the home and the community, our efforts may be almost completely lost. At the present time, not only is too little attention being given by the physician to interpreting to the parents the part they should play in the rehabilitation of their child, but also too little thought has been given to the perspective these parents may have of the future of their own child.

Once a mother realizes that she has a handicapped child there is a shock to her emotional system, especially when she fully realizes that having this child may change the whole pattern of living for her and her family. If the parents cannot make a satisfactory adjustment to having this child in the home and perform their part in helping the doctor, therapist and teacher, the chances for this child's satisfactory rehabilitation are certainly lessened. It is most important that there be established early a good physician-parent and social worker-parent relationship. The social worker is one of the most important members of the rehabilitation team in the early days of adjustment. She very often can give a more realistic and understanding interpretation to the parents than the physician. She can gently guide the parents into the paths of acceptance, adjustment, and cooperation with the doctor, nurse, therapist and teacher. This is a very important part of the rehabilitation procedure. After the parents have been shown and taught what they can and should do for their child, they must be impressed with the fact that they are the "doers" and what we "do" as professionals should only be looked upon in the light of guiding and giving assistance to them in the "doing."

Another weakness in our programs at the present time is the lack of proper instruction of the teacher of the handicapped child. Next to the parent, the teacher is the most important member of the rehabilitation team in developing a child's personality, abilities and the will-to-do. There is an urgent need to interpret to the teacher what her part should be in the rehabilitation of her handicapped children and to let her know (1) what has been done for the child before coming to her class, (2) what is being done medically during the time the child is in her classroom, and (3) what the future may hold for this child. There should be a very close association between the teacher and the parent. Good medical care may be definitely less effective without the proper cooperation of the teacher as well as the parent. Programs of instruction for the teacher along with the parent are responsibilities of the physicians, nurses and therapists in this field of work.

The Nemours Foundation has had recently its first successful parent education conference in Florida. This was planned by the parents of different types of handicapped children with the help of a committee of the Florida Children's Commission. The conference was designed to be an interpretation to the parents of the problems of crippling and what their parts should be in the handicapped child's care. The parents were speakers as well as audience. There were many small discussion groups for parents with professional leaders. There was a so-called "Street of Information" set up with each agency working with crippled children having a representative at a table or in a booth to explain what this particular agency had to offer. This was followed by a comprehensive summary of the group discussions and the whole conference. It is hoped that such a type of conference may be arranged for in Virginia in the near future.

In all crippled children's programs it should never be forgotten that the number one objective in the care of the child is total rehabilitation or the complete, or as nearly complete as possible, restoration of the handicapped to normal living. The doctor, the nurse, the therapist, the teacher, the vocational counselor, the parent and many others form a team who must work together. No one member of the rehabilitation team can do it all. Each member has his part to play. In nearly every community there are the resources for effective team play. However, these resources are not always coordinated to the advantage of the crippled child. Much is to be done in every state and community in effecting a better coordinative program for rehabilitation.

In conclusion, I can only say again how delighted I am to be included today in your dedication ceremony. This auditorium-chapel will be a constant source of pleasure and satisfaction to all of you working here with crippled children. Religious education and the spiritual development of the child will be tied in with medical care more closely than ever before, and your children with good religious foundations will develop better emotional adjustments, greater motivation and stronger personalities. This will be followed more often by successful, independent and happy living—the ultimate goal in the rehabilitation of all crippled children.

Bibliography

Murphy, D. P.: Congenital Malformation—A Study of Parental Characteristics with Special Reference to the Reproductive Process; 2nd Edition, Philadelphia, J. B. Lippincott, 1947.

Shands, Jr., A. R.: The Care and Treatment of Crippled Children in the United States; Journal of Bone & Joint Surgery, 35A: 237-244, January, 1953.

Shands, Jr., A. R.: A Few Remarks on the Rehabilitation of the Handicapped Child; 50th Anniversary Celebration, Massachusetts Hospital School, Canton, Massachusetts, November 6, 1954. (Accepted for publication in the Journal of Bone & Joint Surgery).

Shands, Jr., A. R.: Partners in a Job Better Done; The Crippled Child, 32: 8-9, February, 1955.

Alfred I. duPont Institute

The Use and Misuse of Antibiotics in the Treatment of Infections of the Urinary Tract

AUSTIN I. DODSON, M.D.
J. EDWARD HILL, M.D.
Richmond, Virginia

ANTIBIOTIC preparations have largely revolutionized the treatment of urinary tract infections during the past ten years. Early reports attribute magic powers to some of these, and enthusiastic reception is accorded each new drug as it makes its appearance.

No one will deny that antibiotics have greatly changed the treatment of infections of the urinary tract. For instance, the acute fulminating infections, formerly so frequently fatal, are now readily controlled, so that a nephrectomy for fulminating pyelonephritis is no longer necessary. However, the indiscriminate use of antibiotics without adequate examination of the patient and careful determination of the type of organism producing the infection results in unnecessary expense to the patient, frequently to the masking of degenerative disease that should be recognized and corrected, and occasionally to uncomfortable and at times dangerous anaphylatic or toxic reactions.

The publicity concerning these new wonder drugs by popular science writers and the high-pressure advertising of pharmaceutical companies make it difficult for the physician to obtain a clear prospective of the value of these new preparations until their appropriate place in the therapy of infection has been determined by clinical investigation. Unfortunately, as time passes and antibiotics are used more extensively in the treatment of urinary tract infection, it becomes evident that the panacea for all bacterial infection is yet to be found.

The germicidal powers manifest in the test tubes cannot always be obtained in the patient. In the laboratory, a constant temperature and the desired pH level can be constantly maintained and a known concentration of the germicide can be brought in contact with a definite number of bacteria of a known strain.

In the patient, these facts are often variable. Furthermore, there are such antagonistic factors as necrotic tissue, foreign bodies, poor drainage, multiple strains of organisms and diminished renal function. Then, again, certain toxic manifestations are a definite deterrent to the use of some of these remedies. These toxic complications may occur, not only when the drugs are used in excess and in poorly selected cases, but also when the patient is carefully selected and the dosage well controlled. It must also be remembered that the indiscriminate use of antibiotics may lead to sensitivity which in future administration of the preparation, perhaps when much needed, may cause uncomfortable and dangerous reaction. This is probably more true of penicillin, which has, in all probability, been used with less discrimination than any other antibiotic.

Antibiotics in therapeutic amounts exert a bacteriostatic rather than a bactericidal effect upon micro-organisms. That is, they interfere with growing cellular metabolism rather than destroying the bacteria directly. Consequently, it is important when prescribing these preparations to continue their administration several days after evidence of infection has subsided. Several of the antibiotics are spoken of as "broad spectrum preparations", meaning that they are effective in a wide range of bacteria. It is well, however, to remember that in dealing with infections of the urinary tract, none of these preparations are effective against more than half of the bacteria that are commonly encountered. Therefore, the term "broad spectrum" has a limited meaning so far as infections of the urinary tract are concerned.

Wendell H. Hall[1] found that bacterial resistance to six frequently used antibiotics varied from 7% to 54%. It is also well recognized that many bacteria become resistant during antibiotic therapy. This has been particularly notable in resistance to streptomycin and the resistance of cocci to penicillin. It has also been noted that in many instances of mixed infection when the predominating organism is controlled by an antibiotic to which it is sensitive, other organisms increase in number and activity, continuing the infectious process until the condition is recognized and an antibiotic or antiseptic administered that may be effective.

Therefore, as we review the situation regarding antibiotic therapy, we note that the picture changes

Read at the annual meeting of the Tennessee Valley Medical Assembly.
Received for publication April 8, 1955.

from year to year. Enthusiastic approval of some preparation is followed by a more cautious attitude as the more nearly true value of individual preparations is recognized.

The first antibiotic, penicillin, was discovered in 1929. Its successful application as an anti-bacterial agent during World War II led to extensive research in the search for other useful antibiotics. During this time numerous antibiotics have been investigated, but only 6 or 8 have been found effective in combating bacterial growth and at the same time applicable to clinical use. Chemists and other research workers are constantly on the alert and from time to time are successful in their efforts to produce more efficient and less toxic remedies. Many clinicians have added their observations regarding the activities of these new drugs. By these efforts it is now possible to determine with reasonable accuracy what may be expected from a given antibiotic in the treatment of a specific type of infection.

It is well at this time to call attention to the bactericidal armamentarium of the clinician prior to the advent of the antibiotics. Hexamethylenamine, often sold under the trade name of Urotropin, was probably the first drug used which had definite bactericidal effect. This preparation, first introduced by Nicolear in 1890, although less effective than the more recently developed urinary antiseptics, is still quite widely used. The bactericidal effect is dependent upon the elimination of formaldehyde in strongly acid urine. It was demonstrated that formaldehyde would inhibit the growth of staphylococci in 1:20,000 dilution and the colon bacillus in 1:15,000. Formaldehyde appeared in the urine 30 minutes after the administration of 15 grs. of the drug and the urine became bacteriostatic in 15% of 60 urine specimens examined when 15 grs. were given three times a day. Formaldehyde was eliminated in high concentration in specimens whose pH values were between 4.5 and 5.6. Formaldehyde was not eliminated when the urine was alkaline. The drug is most frequently administered in combination with sodium acid phosphate or ammonium chloride. 20 grs. four times a day can usually be administered several days without evidence of irritation. There are no toxic symptoms, but the prolonged administration in highly acid urine causes irritability of the bladder.

Acriflavine, Serenium, Pyridium and hexylresorcinol each enjoyed brief popularity as urinary antiseptics. It is now generally conceded that both hexylresorcinol and Pyridium exert some analgesic effect upon the inflamed bladder mucosa, but that the bactericidal effect of these drugs is not very impressive.

The next preparation to be widely acclaimed was mandelic acid. This drug is now universally recognized as a useful therapeutic agent in the treatment of urinary tract infection. By laboratory tests, Carroll, Lewis and Kappel[2] found that mandelic acid, in 0.19 to 1% solution in urine with acidity of pH 5.5 or less, was definitely bactericidal to the majority of pathogenic bacteria usually found in the urine. The more acid the urine, the less concentration of the drug that is required. Urine of pH 4.5 would in itself destroy many organisms. In their experiments, E-coli and bacillus proteus were the most easily killed. Streptococci required a more concentrated solution, while Aerobacter aerogenes and Pseudomonas were even more resistant. Clinically, the Proteus bacillus has such an alkalinizing effect on the urine that mandelic acid is not effective.

Observations of the results on mandelic acid were reported by Dodson and Odum[3] in 42 patients. They concluded that the drug was safe in the necessary dosage and when an acidity of the urine was maintained at or below 5.2 it was very active in combating infections of the urinary tract. It is more effective when E.coli is the sole effecting organism and, like all urinary antiseptics, its usefulness is handicapped by poor renal function and obstructive lesions.

Methenamine mandalate or Mandelamine is formed by the union of mandelic acid and methenamine. The drug is used on the same type of organisms that respond to the administration of mandelic acid alone, and the same highly acid urine is desirable.

The most effective agents available for use in combating urinary tract infections before the advent of the antibiotics were the sulfonamides. Early predictions as to their usefulness have been considerably modified but when properly administered in properly selected cases, the results are rarely disappointing. Pharmaceutical action of all these drugs are similar with only slight individual variation. They all form active, and inactive or conjugative forms in the blood and urine. Most of the earlier preparations, notably sulfanilamide, sulfapyridine and sulfathiazole, are now rarely used because equally effective and safer preparations have been discovered. Crystallization and other toxic manifestations are more apt to occur when large doses of the drug are given and when fluids are restricted. A free fluid intake and the administration of alkalines are helpful in preventing renal complications. The large doses administered in other branches of medicine are rarely necessary for the treatment of urinary tract

infections and it is noteworthy that few renal complications have been reported in patients that were treated for infections of the urinary tract. These drugs are excreted principally through the kidney; therefore, it is necessary to have a knowledge of the patient's renal function. Dangerous high blood levels may occur in patients with reduced renal function unless the drug is regulated accordingly.

The sulfonamides are bactericidal for most organisms pathogenic to the urinary tract. They are more effective against streptococci, staphylococci and the colon group of organisms. A few bacteria, notably micrococcus catarrhalis, streptococcus fecales and Pseudomonas aeruginosa are not effected by these drugs. At the present time, the most acceptable sulfonamides for treatment of urinary tract infections are sulfacetimide (Sulamyd), Sulfisoxazole (Gantrisin), Elkosin, and Thiosulfil. These drugs have the advantage that they are almost without serious toxic manifestations since they are soluble in acid as well as alkaline urine.

Gantrisin and Elkosin both have a low rate of acetylation so that the therapeutically active, non-acetylated portion is excreted by the kidneys in high concentration. Goodhope found that Thiosulfil has these advantages, in addition to such a low degree of toxicity that he does not hesitate to give it to patients in whom there is a history of sensitivity to Sulfa drugs. The antibacterial spectrum of all the sulfonamides appears to be about the same.

A new chemotherapeutic agent, nitrofurantoin (Furadantin) has recently been introduced. Preliminary reports indicate that it is effective against many gram-negative and gram-positive organisms, especially those most commonly found in urinary tract infections. Carroll and Brennan found that the majority of strains of E.coli, bacillus proteus, Aerobacter aerogenes, Strept. fecalis, and Alcaligenes were susceptible to Furadantin while Pseudomonas aeruginosa was not. Furadantin has established itself as the drug of choice in treating Proteus infections. It is noteworthy that this drug shows no tendency to permit development of resistant bacterial strains *in vitro*. Furthermore, it does not appreciably reduce the fecal bacteria count so that no over-growth of intestinal tract fungi should occur during therapy. A few patients develop nausea, but no serious untoward side-effects have been noted.

Penicillin is the drug of choice in the treatment of gonococcus infection, and is also effective in urinary infections caused by the coccal group of organisms. It has no effect upon infections caused by bacilli, which probably represent 75% of infections of the urinary tract. There is considerable evidence that penicillin is losing its effectiveness in the treatment of infections caused by staphylococci. This is probably because so many of these infections are caused by surviving resistant strains. Penicillin, therefore, should not be used in the treatment for urinary tract infections as a drug of preference, but only when organisms are present, known to be affected by it. The unwarranted administration of this antibiotic not only delays appropriate therapy for the disease present but submits the patient to the dangers of possible skin rashes and fever, and also may produce sensitivity to the drug.

Streptomycin is of value in gram-negative, bacillary infections and is effective in some strains of Pseudomonas aeruginosa and organisms resistant to most antibiotics. It is the only antibiotic of value in the treatment of tuberculosis.

The rapid development of resistant strains of bacteria is probably the chief disadvantage in the treatment of urinary tract infections with this drug. If infection has not been completely eradicated in a few days with Streptomycin, one may assume that the organisms have become too resistant for effective therapy. Toxic manifestations consisting of damage to the 8th cranial nerve and occasionally renal irritation are rarely noticed in the short period of time that is usually required for the usual infections of the urinary tract. When used in the treatment of tuberculosis, the clinical advantages are usually sufficient to off-set any toxic manifestations that may occur.

Aureomycin is especially beneficial in the treatment of Aerobacter aerogenes, E.coli and Streptococcus fecales infections. It is less effective in Staphylococcic infections and of little value in infections caused by Pseudomonas or bacillus proteus. The antibiotic causes a very acid urine which is helpful in therapy of many infections.

William I. Metzicer[4] and associates treated a total of 113 urinary tract infections in adults with aureomycin. Of these, there were 62 acute cases, all but one of which showed reduction or elimination of clinical symptoms, but only in 58% were the bacteria completely eliminated from the urine. There were 51 chronic cases with relief of symptoms in 45%, and sterilization of the urine in 33%. In most instances the drug is relatively non-toxic but occasionally very troublesome cases of colitis may occur.

Terramycin is probably less toxic than aureomycin although gastro-intestinal irritation is occasionally noted. This antibiotic is effective in the same group of organisms as aureomycin and in addition may be

used to advantage in some strains of Pseudomonas aeruginosa.

Chloromycetin is effective in the treatment of most urinary tract infections. It is more effective against Proteus vulgaris than any other antibiotic and equally as effective against the coccoid group of organisms. It is well tolerated and does not cause the irritation of the intestinal tract occasionally seen in patients treated with aureomycin or terramycin. Prolonged use may cause aplastic anemia and frequent examinations of the blood should be made when it is to be continued for any length of time.

Erythromycin, a more recently developed antibiotic, is highly selected in its effectiveness, being applicable almost entirely to coccal infections. It is well tolerated and is said to inhibit the strains of staphylococcus and streptococcus which are resistant to penicillin.

Polymixin-B and neomycin are both useful antibiotics but are decidedly more toxic than those previously mentioned. Their use should be confined to hospitalized patients that can be under careful observation. Both of these drugs, when given in large amounts and over a prolonged period of time, are nephrotoxic and to some extent neurotoxic. Nesbitt, Dodson, and McKenny[5] administered neomycin to 18 cases of chronic urinary tract infection, all of whom had previously proven refractory to from 1 to 5 different chemotherapeutic and antibiotic agents. Twelve of these patients had normal urine at the end of the course of treatment and eight were clinically free from infection when seen one week to nine months following therapy. Polymixin-B is particularly useful in resistant strains of Pseudomonas aeruginosa.

To repeat the statement made in the second paragraph of this paper, infections of the urinary tract have been largely revolutionized during the past decade. It is often possible to use specific drug therapy against specific organisms. This improvement in therapy is largely the result of the administration of the antibiotics, but it should be emphasized that the treatment of urinary tract infections consists of more than merely ordering an antibiotic or some other urinary antiseptic. Grayson Carroll[6] has stated that in the choice of drugs for the treatment of urinary tract infections, the physician must consider first the ease of administration; second, the toxic symptoms and side reactions; third, the development of resistance of bacteria to the germicidal agent; fourth, the cost to the patient, and, fifth, the effectiveness of the preparation used. I would suggest that the effectiveness of the drug used should be put in fourth place and the cost of the drug in fifth place.

Obviously drugs that must be given hypodermically have a definite disadvantage when administered to patients who are ambulatory, both because of inconvenience and in cost to the patient. A drug with high bactericidal powers but with toxic manifestations which may cause serious inconvenience and possible danger to the patient's welfare, certainly should not be chosen over a safer, even though slightly less effective agent.

The effectiveness of the drug used must of necessity be carefully weighed against easy administration, toxic manifestation, and cost. The patient with mild urinary tract infection, causing no appreciable damage to the urinary tract, and particularly when produced by organisms of low resistance to bactericidal agents, may be treated quite effectively by less toxic and less expensive drugs, even though definitely less effective. In acute severe and fulminating infections, much more risk of toxicity must be taken and excessive cost must be given less consideration.

References

1. Hall, W. H.: Use and Misuse of Antibiotics, Minn. Med., 35: 692 (July) 1952.
2. Carroll, Grayson, Lewis, B., and Kappel, L.: Mandelic Acid: Its Theraputic Value and Limitations, American Journal of Surgery, 42: 365, 1938.
3. Dodson, A. I., and Oden, P. W.: A Clinical Study of the Theraputic Usefulness of Mandelic Acid, Virginia Medical Monthly, 66: 255, 1939.
4. Metzger, William I., *et al.*: Aureomycin In Urinary Tract Infections, Journal of Urology, 67: 374 (March) 1952.
5. Nesbit, R. M., Dodson, A. I., Jr., and MacKinney, C. C.: Neomycin in the Treatment of Urinary Tract Infections, Antibiotics and Chemotherapy, 2: 447 (Sept.) 1952.
6. Carroll, Grayson: Treatment of Urinary Tract Infections, Texas Journal of Medicine, 49: 761-765 (Oct.) 1953.

409 Medical Arts Building.

Old and New Therapy for Asthma

SUSAN C. DEES, M.D.
Durham, North Carolina

IN THE 1955 edition of the Physician's Desk Reference,[1] 126 different proprietary products are listed for treatment of asthma. 75 additional preparations commonly used for asthma are indexed under iodides, aminophyllin, ephedrine and antihistaminics, making a bewildering total of more than 200 medications in this reference from which to choose in prescribing for asthma. Even so, this does not include recently introduced drugs, asthma powders, nor other combinations and "cures" which can be purchased over the counter in drug stores. For practical purposes most physicians either familiarize themselves with a few drugs, which they use consistently, or they try each new preparation as it comes to their attention with varying degrees of critical appraisal.

To keep abreast of the flood of new drugs and to relate them to a sound knowledge of therapeutics is an almost superhuman task at present. In order to offer the best symptomatic treatment for asthma one must decide what he expects to accomplish with treatment for each patient.

As we review the mechanism by which asthma is produced or increased, we see that purely symptomatic treatment is only the first step in therapy. The ultimate goal is to reach basic causes and to alter abnormal or unbalanced physiological processes. A modification of Bray's[2] schematic representation of factors which produce asthma illustrates this (Table 1), and emphasizes that at present and probably for some time to come, our treatment necessarily must be superficial.

If we recall the definition of asthma—dyspnea or difficult breathing, produced by broncho-spasm, edema and excessive bronchial secretion—we realize that in different patients, and at different times in one patient, these three components will have very different significance. In any attack, one feature ordinarily will predominate, and should be treated first. In order to intelligently utilize all the measures now available, we can profitably scan the objects of our therapy. This will result in our retaining time proven remedies, while we incorporate new advances, yet avoid becoming completely bewildered by proprietary names and fads in treatment.

TABLE 1.

MECHANISM OF ASTHMA

Asthma is Produced or Increased by:	
1. Allergic sensitivity	Various Allergens
2. Reflex bronchospasm	Foreign body Tumor Neurogenic factors Psychogenic factors Direct irritants (smoke, chemicals, etc.)
3. Infection	Local irritation Sensitivity
4. Anatomical changes	Malformations Pressure on bronchi Emphysema Unequal aeration
5. Physio-chemical changes	Electrolyte imbalance Histamine or Histamine-like substance Cholinergic agents Endocrine factors

TABLE 2.

OBJECTS OF TREATMENT

In Asthma we are Treating:	Causing:
Bronchospasm	Dyspnea
Edema	Cough
Excessive Secretion Inspissated plugs Atelectasis	Fatigue
Complications of above and Inflammation Infection	Fever Dehydration Toxicity
Anoxemia Anxiety	Anxiety Restlessness
Emphysema	Decreased ventilation

The aim in developing new bronchodilators is not only to produce this effect, better, but to eliminate the need for hypodermic administration. Another object is to avoid the undesirable side effects of tachy-

From the Department of Pediatrics, Duke University School of Medicine, and Duke Hospital, Durham, N. C.
Presented before the Norfolk County Medical Society, Norfolk, Va., March 30, 1955.
Received for publication April 15, 1955.

cardia, nervousness and hypertension so common after epinephrine and ephedrine.

Table 3.
Agents to Relieve Bronchospasm

	Trade name:
Epinephrine. 1901	
Isopropyl arterenol	
	Isuprel
	Aludrin
	Isonorin
	Isorenin
	Norisodrine
	Nephenalin
Ethyl-norepinephrine	Bronkepherine
	Butanephrine
Phenylephrine	Neosynephrine
Ephedrine. 1885	
Ethylephedrine HCL	Nethamine
Methamphetamine	Desoxyephedrine
	Desoxyn
Phenylpropanolamine	Propadrine
Methoxyphenamine HCL	Orthoxine
Xanthines	
Theophyllin	
Theophyllin cholinate	Choledyl
Theophyllin methylglucamine	Glucophylline
Aminophyllin plus adsorbent	Cardalin
	Dai-nite
Khellin (Visammin)	Ammivin
	Eskel
	Khelism.

All of these new epinephrine derivatives can be given by inhalation, and most of them, orally. In general, their effectiveness is less consistent in all patients than are either epinephrine or ephedrine. By inhalation most of these drugs cause less local irritation than does epinephrine. Their overall usefulness is very great; they lend themselves to combinations of all sorts, for example, Nephenalin[r] combines the rapid actions of isopropylarterenol with the slower more prolonged effect of ephedrine and theophyllin.[3] Others are used in combinations with antihistaminics and iodides.

The second group of bronchodilators, xanthine, i.e., theophyllin, aminophyllin derivatives, can be given intravenously, rectally and orally. The number of combinations in which they occur is too extensive to detail here, since they appear in the majority of oral combinations for asthma. One new development is Choledyl[r] (theophyllin cholinate) more soluble, and with less gastric irritation than aminophyllin, therefore allowing sightly theophyllin blood levels.[3] The other new modification is the addition of aluminium OH to aminophyllin to decrease gastric irritation and thus permit larger oral doses of aminophyllin, as is done in Cardalin[r] and DAi-Nite[r] tablets. This simple maneuver could be done by simultaneously using some absorbent along with any favorite xanthine compound.

The most recent addition to the bronchodilators is actually a revival of an old Arabic herbal, Khellin, which is primarily a coronary dilator. It is derived from the plant ammi visnaga. Its action is not as predictable in asthma as many other drugs, and the dose must be individualized as it has a cumulative effect in the tissues. This may partially explain the widely divergent reports of its effectiveness. Since it is an entirely different type of drug from these others, further study of its properties may lead to improved derivatives.

Table 4.
Expectorants*—Goodman and Gilman, 1955

Steam 85%	CO_2 5-10%	
1. Sedative Type:		
Salts	Ammonium chloride, carbonate; potassium citrate, acetate; sodium citrate	
Iodides		
Ipecac		
Tartar Emetic		
Demulcents	Acacia, glycyrrhiza, sugar syrup	
2. Stimulant Type:		
Creosote	Guaiacol	Terpene hydrate
Turpentine	Pine	Eucalyptol
3. Anodyne Type:		
Codeine	Methodone	Demerol, etc.

* Modified from Goodman and Gilman. The Pharmacological Basis of Therapeutics, 1955.

We turn now to the expectorants, where a glance at the list shows us these have changed very little from the pharmocopoeia of several hundred years ago.[5] This point has been illustrated in a most readable way by Dr. W. B. Blanton in the February, 1955, issue of the *Virginia Medical Monthly*.[6] These familiar drugs continue to appear in new combinations, such as "Robitussin[r]" consisting of guaiacol, and desoxyphedrine.[7] They also are periodically revived with all the fanfare of a new discovery as is the case during the past few years of the Gay Treatment for Asthma. As is generally known, this consists essentially of KI and Fowler's solution, to which are added small amounts of Na-phenobarbital, digitalis, saccharine, and coloring matter.[8] A sim-

ilar prescription appeared as a proprietary "Hollandische" mixture in Munich more than a hundred years ago; and, according to Dr. Blanton, arsenic was used for asthma in 700 A.D. The combination is effective for some chronic asthmatics. The mode of action of the arsenic is not clearly understood. The great objection to this type of treatment is that people vary in their rate of excretion of arsenic; and, as the compound is taken for long periods of time, there frequently is chronic arsenical intoxication. The symptoms of rhinitis and cough resemble in some respects those for which the drug is given and the patients frequently increase their dosage even more. The other danger is the late development of arsenical keratoses, a pre-malignant skin reaction. This complication may come on as long as 10 to 25 years after the use of Fowler's solution. This may be of little significance to a person past middle life, but to a young person this may present a very real hazard to its use. We, personally, have seen many children with chronic arsenical poisoning, with dermatitis and high levels of arsenic in the urine, who have been on this mixture, and we feel that among the 200 other prescriptions for asthma, there must be some other which would be equally effective, and less dangerous. The other reactions to arsenic, the rashes, anemia, blood dyscrasias, renal irritation, neuritis, occur frequently enough from Fowler's solution to make it imperative to follow the patient very closely if he is on this mixture.[9,10]

Among the agents used to reduce edema and to prevent or remove excessive secretion, we find the two most important new contributions of the past twenty years, the antihistaminics, and the steroid hormones. The antihistaminics act in this fashion in asthma, by virtue of their atropine like effect in drying secretion and reducing edema. The new varieties of these drugs continue to appear, although with not quite such lightning like rapidity as a few years ago when they were first introduced. The newer ones are more potent; hence, smaller doses, and less side effect. The other recent modification has been to develop long-acting drugs or prepare them in repeat action form, or for prolonged release.[11] Once one knows that a given antihistamine is effective for a patient—and there is wide individual variation in the response to these drugs—one can change to a long acting form of the same drug for day long control. Experience bears out the initial impression that these drugs are less effective in asthma than in other types of allergic reactions. Asthmatic children usually respond better than do adults, but even with children much of the benefit of antihistaminics is probably due to their sedative effect.

The use of detergents in aerosols as a means of thinning and removing bronchial secretions is another development of recent years. Improvements continue in the nebulizers and attachments for comfortable inhalations of aerosols. Alevaire[r] (Triton A-20) is one of the most widely used.[12] It serves as an excellent vehicle for bronchodilators, as well as antibiotics. How much liquefaction of secretion actually is produced by the detergent is hard to measure objectively. Clinical studies indicate that they materially thin secretions and permit their removal with less effort by coughing.[15]

Tryptar,[r] the enzyme trypsin, is also used for the same purpose, both in asthma and chronic pulmonary infections.[13,13a] Conflicting reports of effectiveness are more equally divided, as certain workers believe it causes changes in the bronchial mucosa,[14] with little change in sputum viscosity; others report allergic reactions to it.[15]

It has the disadvantage of requiring more precision in its use, and is not adapted to uncooperative patients such as little children, and it is more expensive than the detergents. Streptodornase has been used in this same way, but not widely, and is adapted only to certain cases. Pancreatic Dornase[13b] is another preparation recently introduced for aerosolization to liquefy secretions.

The most significant advance in the therapy of asthma and allergy in the past 10 years is the introduction of the steroids.[5] In spite of the fact that a complete understanding of how they work in asthma has not yet been reached, we know that they rapidly reduce inflammation, and therefore are the most potent drugs we have for this purpose. The details of dosage are so clearly set down in the literature that they do not need to be repeated here, except to stress that dosage is determined by the severity of symptoms and not by the size of the patient. Laboratory studies indicate that ACTH, oral Cortisone, Hydrocortisone, and intravenous Hydrocortisone all require at least 4 hours to reach their peak effectiveness, and begin to wane after that, so that dosage by these routes should be spaced no longer than every 8 hours. Intramuscular Cortisone does not have much effect before 24 hours after administration and is effective 48 hours after the last injection. This means that in treating patients one should have oral doses of cortisone and hydrocortisone no more than 8 hours apart, and, if the patient does well on 1 dose every 12-24 hours, then he probably could be maintained on a smaller total dose at more frequent intervals.

If one contemplates long term therapy for asthma one must weigh the advantages of oral medications with adrenal cortical hormones which may suppress adrenal function, against the disadvantage of discomfort and inconvenience of intra-muscular injections with adrenocorticotropic hormone which stimulates adrenal function. As time goes by this becomes an increasingly important decision to make. Each case must be considered individually. We have been impressed with several children we are currently following, who have been on cortisone or hydrocortisone for long periods who do not tolerate periods of stress well. We are trying to change them to ACTH, (Corticotropin) or at least to give them brief courses of this hormone for stimulation.

In spite of the wonderful assistance these drugs give in emergencies, they have familiar serious side effects, so that we believe they should be reserved for emergencies and for severe asthma refractory to an adequate trial of conventional therapy. Among the reactions we have encountered in children are hypertension, one cerebral accident with death, severe allergy to ACTH, perforated duodenal ulcer in a 4 year old, gout in a 12 year old boy, and later precocious breast development in this lad. Two other cortisone treated children died suddenly after many months of treatment, one while taking 25 mgm. daily, and the other 2 weeks after it was discontinued. We could not definitely establish that cortisone played any role in either of these fatalities, but in one child, acute adrenal insufficiency may have been a decisive factor. Personal experiences such as these serve as a balance to over enthusiasm and indiscriminate use of these valuable and frequently life saving drugs.

New forms of steroids are being developed and presented to the profession. One, 9-a-fluorohydrocortisone has not proven valuable in asthma, and causes too much sodium retention to be desirable in asthma. Meticorten (Metacortandracin) is another variant which as yet is not established for asthma, but which may prove useful, as it seems less apt to cause hypertension and electrolyte imbalance. In its effectiveness for rheumatic conditions it appears to have five times the potency of cortisone.

The anxiety which is an integral part of asthma deserves special note, since, if untreated it may nullify all other efforts. The sedatives which are currently used for general relaxation and bronchial relaxation are basically the same ones which have long been known. These include opiates, ether, alcohol, barbiturates, chloral hydrate, bromides, paraldehyde. Morphine and its close derivatives should *not* be used for asthma. Several carefully studied series of fatal cases of asthma have demonstrated that death followed very closely after administration of morphine, probably due to depression of the respiratory center. The other objection to morphine is addiction. In my opinion, this same holds true for Demerol, although this drug is extensively used for asthma. The barbiturates are better suited for asthmatics, although they, too, have some depressing effect on respiration, and may produce sensitivity reactions. Variations of the barbiturates continue to appear, and this permits a wide choice of sedative to suit the individual patient and to avoid habituation, sensitization and tolerance to the drug.

Among the new non-barbiturate sedatives are several very interesting for asthmatics. "Romilar" (dextro-methorphan hydrobromide), a non-narcotic, has also a particular antitussive effect.[16] Methylparafynol, Dormison^{r}, and Carbromal^{r} (bromdiethyllacturea), Doriden^{r} (glutethimide), are recently introduced non-barbiturate sedatives. Another type of relaxant, introduced primarily for its hypotensive action is Rauwolffia, or Serpasil^{r}. Charlton and Hansen are currently reporting on its use in a series of asthmatics whose asthma was increased by tension.[17] They found it effective in this group of patients. Further experience with it in this connection will bear watching.

We turn now to several other recently introduced drugs which do not lend themselves so easily to a basically pharmacological or physiological classification. While their origins stem from older drugs, they have been presented as new treatment for asthma. One of these is Phthalamaquin or aureoquin, recently developed by Geschicter.[18] This consists of a quinine derivative combined with the antihistaminic thenyl pyramine. The general importance of quinine has dwindled rapidly in the past 20 years, with the control of malaria, but in the past, quinine, too, was used for asthma. This modern derivative of quinine has a bronchodilating effect in animals, and is found to be selectively concentrated in lungs and liver. Geschicter prescribes phthalamaquin in conjunction with aminophyllin hydroxide continuously for several months. Enthusiastic reports have appeared, particularly for its long lasting effect in refractory asthma, with freedom from symptoms for months and years after medication had been discontinued. Our personal experience in children with these drugs, which were supplied to us by Dr. Geschicter, has not been as uniformly impressive as his reports based on a larger number of patients. We have found no intolerance to the drugs in a small group of care-

fully followed patients, but only 1 of 11 children had complete relief of asthma. Seven showed moderate improvement, and two were unimproved, while one stopped prescription after one week. Our patients were selected from among the most severe chronic asthmatic in our practice. Again, this drug needs more critical investigation.

Piromen[r] is another of the many asthma remedies. It is a bacterial polysaccharide derived from B.Pyocyaneus (Ps. aeruginosa). It is said to be non-antigenic, but anaphylactic reactions have been reported following its use.[19] Originally it was thought to be effective orally, after the individual dosage requirement was established by intravenous route. Intramuscular or subcutaneous dosage was also advised. Several conflicting reports have appeared regarding its usefulness in asthma.[20] Perhaps because my own experience with it has been disappointing, I feel that the most critical evaluation of the drug was done in the series which reported inconclusive results. It has an effect resembling ACTH in some respects, in that circulating eosinophiles drop for a few hours after an injection. It has no reported, nor have we observed any, effect, on blood pressure, fluid balance, or blood sugar. It is an excellent pyrogen, but sub-pyrexial doses are thought to be the correct ones for treating allergy. It is an intriguing type of therapy, which is definitely unproven, but which may find its place in certain allergic conditions.

Another unproven remedy for asthma is nitrogen mustard. Since this drug has a cholinergic effect of producing bronchorrhoea, it also has a powerful cytotoxic action, and may alter enzyme relationships. Because of its toxicity, it has had limited use, and will need much more evaluation before any opinion can be made of its possible merits.[21]

This discussion to date has largely been a review of the various drugs which have been and are used in asthma, attempting to show how new and currently used drugs are related to some of their predecessors.

As indicated in our early diagrams, simply giving symptomatic medication is not adequate for treating asthma. The complications must be treated, the principal one being infection, with its train of debilitating features, while the other one is lung collapse. The development of atelectasis which does not clear up spontaneously for several days, or even requires bronchoscopy during an attack of asthma is a very frequent occurrence. Perhaps all of you are aware of this but I have the distinct impression that I see this more frequently in children than formerly. For example, I am able to recall 12 ashmatic children with one or more episodes of atelectasis whom I am now currently following. Some have required heroic treatment with bronchoscopy, and some have cleared spontaneously with only conservative measures such as steam and Alevaire[r]. In children, atelectasis is one of the commonest reasons for asthma to persist in spite of adequate medication.

When we review the advances in asthma therapy in the past 50 years, we find that we have antihistaminics, steroids, detergents, antibiotics, sulfonamides, improved bronchodilators, variants of the xanthines, and innumerable sedatives. We have many technical improvements in the administration of physical treatment, such as oxygen and inhalation therapy and bronchoscopic techniques. Our desensitization programs are a development of the past 50 years, and while we have not mentioned them in this discussion, thanks to immuno-chemical advances, we are on the threshold of having vastly improved potent specific allergens which will remove much of the confusion and mysticism from the "allergy shots".

We are sufficiently aware of the all prevading importance of psychogenic factors in asthma to assign to them their proper role and to do what we can for them. The other "cure" for asthma which Dr. Blanton stressed in his historical presentation as being a venerable remedy through the centuries, "a long voyage" and one to which we still have frequent recourse, is even simpler in these days than ever before.

Taken in its entirety, the amalgamation of the old and new therapy for asthma provides our patients with much relief from their distress. In spite of this, a survey of our armamentarium leaves us humble in realizing that much remains to be learned about the basic problems of asthma and that further advances lie only in that direction.

Bibliography

1. Physicians Desk Reference, 9th Edition. Medical Economics, Inc., Rutherford, N. J., 1955.
2. Bray, G. W.: Recent Advances in Allergy. 3rd Ed., P. Blakiston's Son & Co., Inc., Phila., 1937.
3. Dees, S. C., *et al.*: The Use of an Orally Administered Combination of Rapid and Prolonged Bronchodilators in Asthmatic Children: A Clinical Study of Nephenalin Pediatric,[r] Ann. Allergy, 11: 297 (May-June) 1953.
4. Broh-Kahn, R. H. (Ed.): A Symposium on New Pharmacologic and Clinical Perspectives of Oral Nephenalin Pediatrics[r], Ann. Allergy, 11: 297 (May-Gen. Prac. Clin.: 167, 245, 1954.
5. Goodman, L. S., and Gilman, A.: The Pharmacological Basis of Therapeutics, 2nd Ed., Macmillan, New York, 1955.

6. Blanton, W. B.: The Symptomatic Treatment of Asthma, Va. Med. Monthly, 82: 72, (Feb.) 1955.
7. Blanchard, K., and Ford, R. A.: Effective Antitussive Agent in the Treatment of Cough in Childhood, Journal-Lancet, 74: 443, (Nov.) 1954.
8. Gay, F. S., and Gay, E. D.: The Gay Treatment of Asthma, Mississippi Doctor, 29: 142, (Nov.) 1951.
9. Hansen-Pruss, O. C.: Arsenic in the Treatment of Asthma, S. Med. Jour., 48: 270, (Mar.) 1955.
10. Dees, S. C.: Drug Therapy for Asthmatic Children, N. Car. Med. J., 10: 12, 63, (Dec.) 1949.
11. Rogers, H. L.: Treatment of Allergic Conditions with Sustained Release Chlorprophen-pyridamine Maleate (Teldrin), Ann. Allergy, 12: 266, (May-June) 1954.
12. Miller, J. B., *et al.*: Alevaire Inhalation for Eliminating Secretions in Asthma, Sinusitis, Bronchitis, and Bronchiectasis of Adults. Ann. Allergy, 12: 611, (Sept.-Oct.) 1954.
13. Prince, H. E., *et al.*: Aerosol Trypsin Therapy in the Treatment of Asthma, Ann. Allergy, 12: 25, (Jan.-Feb.) 1954.
13a. Unger, A. H.: Proper Use of Aerosol Trypsin in Bronchial Asthma and Other Chest Diseases. Ann. Allergy, 12: 642, (Sept.-Oct.) 1954.
13b. Solomon, *et al.*: Aerosols of Pancreatic Dornase in Bronchopulmonary Diseases. Ann. Allergy, 12: 71, (Jan.-Feb.) 1954.
14. Farber, S. M., *et al*: Metaplasia, and Dyskeratosis of Bronchial Epithelial Cells Following Inhalation of Trypsin and Desoxyribonuclease. Lab. Invest., 3: 33, 1954.
15. Wasserman, E.: Studies of the Effect of Surface Active Agents and Trypsin on Sputum from Asthmatic Patients. To be Published, J. Allergy, Read by Title, Am. Acad. Allergy, Feb. 4, 1955, N.Y.C.
16. Case, L. J., Frederick, W. S., and Andosca, J. B.: Quantitative Comparison of Dextromethorphan Hydrobromide and Codeine, Am. J. Med. Sc.: 227, 291, 1954.
17. Charlton, J. D., and Hansen-Pruss, O. C.: Serpasil As an Adjunct in the Treatment of Allergic Diseases, Particularly in Emphysema. Presented before the S. Eastern Allergy Assoc., March 26, 1955. Orlando, Fla.
18. Geschicter, C. F.: A New Treatment for Bronchial Asthma: A Preliminary Report. Bull. Georgetown Univ. M. Center, 7: 39, (Nov.) 1953.
19. Fenton, M. M.: Adjunct Treatment of Certain Allergies Responding Unsatisfactorily to Conventional Therapy. Ann. Allergy, 11: 336, (May-June) 1953.
20. Fond, J. A.: Piromen Therapy. J. Allergy, 24: 336, (July) 1953.
21. Waldbott, G. L.: Nitrogen Mustard in the Treatment of Asthma. Ann. Allergy, 10: 428, (July-Aug.) 1952.

Why Injections Hurt.

Practically everyone at some time or another has had an injection and practically everyone knows it hurts sometimes. It's not just the jab of the needle as it punctures the skin that causes the trouble, according to Dr. Janet Travell, of Cornell University Medical College. Her report on injection pain appeared in the June 4th Journal of the American Medical Association. There are three reasons why the injection hurts. One is mechanical—the needling, or sudden distention of tissues from rapid injection of fluid. The others are irritation—due either to antiseptic on the skin or to the injected fluid itself, and abnormal sensitivity of the skin or the muscle.

She strongly disagreed with the notion "that some pain is to be expected from the mere jab of the hypodermic needle," and said "given a non-irritant solution" injections can be made painless. The best way to eliminate skin pain is by cold. Years ago an ice cube helped; now sprays of powerful cooling agents that do not themselves irritate can be used. Muscle pain can be avoided by testing for and avoiding "trigger areas" that are especially sensitive, or by using a local anesthetic in the injected fluid. This may also help relieve pain from irritant solutions.

On questioning a professional audience, Dr. Travell found only one in a hundred had never had an injection, and only about ten per cent said they did not dread the next one.

Recent Trends in the Treatment of Carcinoma of the Upper Respiratory Tract

G. S. FITZ-HUGH, M.D., F.A.C.S.
S. G. HOBART, JR., M.D.
Charlottesville, Virginia

CANCERS of the head and neck have been estimated to comprise about 12 to 14 per cent of those of the entire body. Our comments will be related to about one-fourth of this group, namely, squamous cell carcinoma of the upper respiratory tract involving the nasal passages, nasal sinuses, nasopharynx, oropharynx, hypopharynx, and larynx. It is in this division that we are mainly interested. The treatment regime to be commented upon is that which is generally followed in the Department of Otolaryngology at the University of Virginia.



Fig. 1. Epidermoid carcinoma of maxillary and ethmoid sinuses. Radical resection of maxilla and ethmoid labyrinth, with evisceration of orbit. Surgery followed by irradiation. Well after five years.

Department of Otolaryngology, University of Virginia Hospital, Charlottesville.

Read, in part, at the meeting of The Virginia Society of Ophthalmology and Otolaryngology, Natural Bridge, May 7, 1955.

Received for publication May 13, 1955.

Advances in therapy have been largely in the field of more extensive surgery, in an effort to extirpate all of the tumor and thus effect a cure, either at the expense of or in conjunction with irradiation therapy. It has also become apparent that palliative surgical procedures are often beneficial in prolonging the useful life of the patient with far advanced neoplastic disease, and add to his or her comfort in the later phase of the disease.

Although the trends are toward more extensive surgery, the future use of supervoltage irradiation, with its favorable effect upon the surface areas and increase in efficiency by the delivery of deeper cancerocidal dosage, may alter the pendulum swing now favoring surgery. The addition of radioactive isotopes to the armamentarium of therapy may also do much to



Fig. 2. Sub-totally resected maxilla, including carcinoma.

influence such an opinion. Neither has been available to us as yet for treatment purposes.

Little tangible advance in the control of squamous cell carcinoma by biologic or medical means may be demonstrated at this time. We have used Nitrogen Mustard (HN_2) and similar compounds in the therapy of patients with advanced squamous cell carcinoma of the upper respiratory tract, without sugnificantly favorable results. Possibly, pain has been lessened somewhat, particularly in these patients with osseous metastases. With respect to comfort, one must mention the merits of the drug, Chlorpromazine (Thorazine) in the treatment of carcinoma cases. By its potentiation effects in combination with narcotics and its ability to create a sense of well-being, it has proven to be of real value. Also, Chlorpromazine has been successful in controlling nausea and vomiting, due to x-ray irradiation and following nitrogen mustard administration.

The advances in surgery may be attributed to a number of factors, such as the improvement in knowledge concerning anesthesia and nutrition, the availability of blood for replacement purposes, antibacterial drugs, and a better understanding of the cause and the routes of extension of uncontrolled cancer

Much credit should be given to those who. in recent years, have accomplished so much in the development of vascular surgery. The use of freeze-dried homografts and plastic materials, such as orlon, to replace cancer-invaded major vessels, e.g.. the carotids, will undoubtedly eliminate one of the barriers in the effort to totally eradicate primary and metastatic carcinoma. The increased use of skin grafts as wound dressings, to hasten healing and minimize scarring, has aided materially in hastening

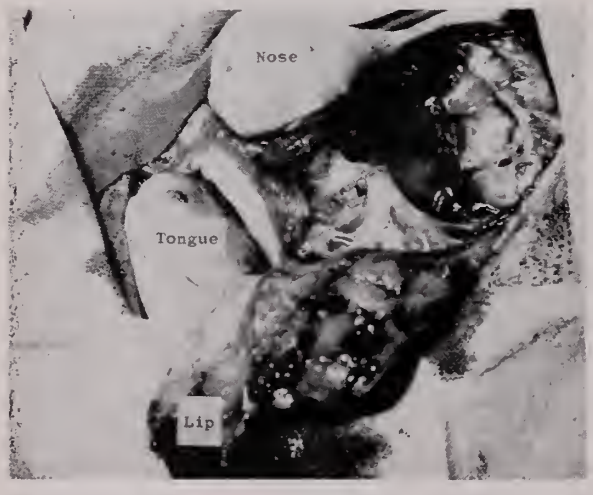


Fig. 3. Bloc resection of left ethmoid labyrinth with evisceration of orbit for epidermoid carcinoma. Resected specimen shown in following illustration.

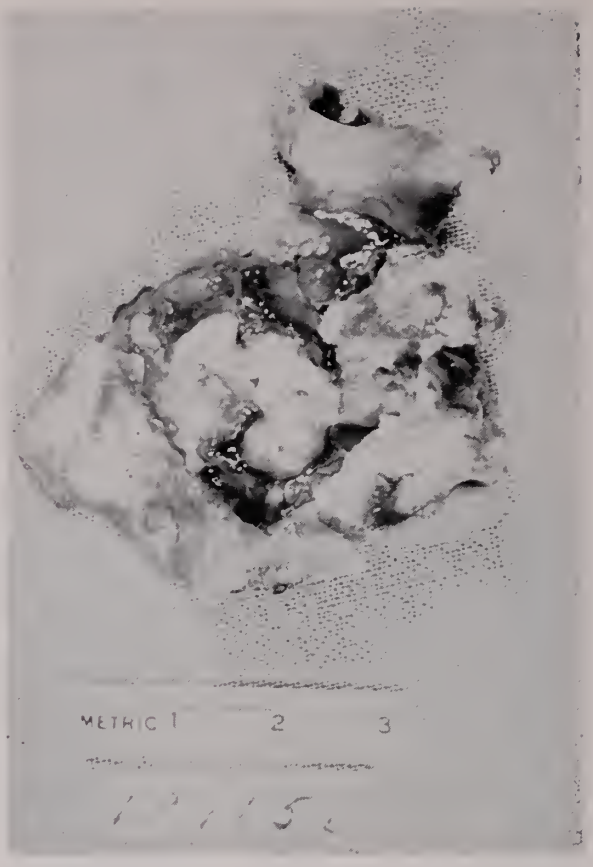


Fig. 4. Bloc resection of ethmoid labyrinth, including epidermoid carcinoma in center of specimen.

rehabilitation. This is particularly applicable in surgery for intraoral and nasal sinus cancer. The advancements in the art and science of prosthetics, intraoral and facial, such as the development of such prostheses as dentures, ears, noses, and eyes, have been very helpful, by influencing the patient in the acceptance of extensive surgery, and also by influencing the surgeon in urging the acceptance of this treatment.

Finally, one must note the increased interest shown in larger groups of physicians and the improved training in the treatment of cancer of the head and neck. The obvious advantage of teamwork among the various specialists, in order that all might receive maximum benefit, should be apparent. Some limited competition among the various groups, for the obtainment of better results, adds zest to the program and contributes to improved care of the patient.

Contraindications to surgery for carcinoma of the upper respiratory tract are few. They may be listed. as follows:

1. Distant metastases, as in the osseous or pulmonary system; and, even here, palliative irradiation



Fig. 5. Epidermoid carcinoma of right nasopharynx. Extension to cervical nodes. X-ray irradiation therapy. Possibly, later removal of cervical nodes if recession is incomplete, clinically.

and surgery may be beneficial in adding to the comfort of the patient.

2. Systemic disease of such a nature that a surgical procedure would definitely result in the immediate demise of the patient, or a disease so advanced that the anticipated longevity of the patient is measured in weeks.

3. Involvement which is so advanced and extensive, anatomically, that a surgical procedure would leave the patient in a condition in which proper care would be impossible, or in one so insufferable that he could not live with himself because of the disfigurement and other disabilities.

Palliative x-ray treatment is always offered, although we feel that radiotherapy aggravates the discomfort of the patient without appreciably prolonging the survival period, particularly in some cases of advanced epidermoid carcinoma of the laryngopharynx and oropharynx. However, as we are occasionally surprised by a favorable response, we continue to advise this type of therapy, always in hopes of obtaining such a result.

We would like, now, to consider specifically some of the methods of treating carcinoma of the upper respiratory tract.

Nasal and Paranasal Cavities: The vast majority of these cancers arise in the maxillary sinus, and are seen by the physician, primarily, in a late stage of the disease.

These patients are treated by bloc surgical extirpation of the tumor-bearing bone and soft tissue. Electrosurgery is used on the marginal areas. Surface skin and the eye are sacrificed when involved, or when any doubt exists as to the involvement. Exposure of the dura is often necessary; however, this causes no concern. The external carotid arteries are not ligated. The rare cervical node extensions are removed, en bloc, by neck dissection. The surgical procedure is followed in 14 to 16 days by x-ray irradiation. Even in the event of clinical and radiologic evidence of invasion of the tissues of the pterygomaxillary fossa, or osseous involvement of the base of the skull, surgery is advised. Palliative surgery, here, has real merit in the prevention of a foul-odored, bleeding, painful, ulcerative, facial mass, which creates a situation intolerable to the patient and those in the immediate environment.

The use of skin grafts and prostheses promotes rapid healing of the wound. Early fitting of prostheses improves speech and ingestion of food, thus greatly benefiting the morale of the patient.

We feel confident that in following this plan of therapy, we are increasing the comfort, useful lon-



Fig. 6. Carcinoma of tonsil and adjacent pharynx. Too extensive for surgical removal. Treatment of choice: palliative irradiation.



Fig. 7. Carcinoma of hypopharynx—left piriform sinus. Treatment of choice: total laryngectomy and partial pharyngectomy, plus unilateral neck dissection.

gevity, and survival rate of persons in this category.

Nasopharynx and Cervical Nodes: Here again, the discovery of the tumor is usually late. Cervical nodes are included in this group, for so often there is gross involvement present when the case is first seen. Since all of the malignancies of the nasopharynx are comparatively inaccessible surgically,

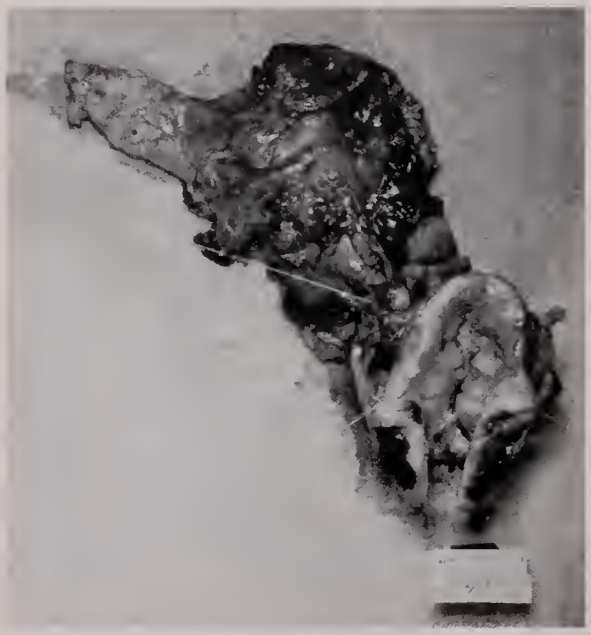


Fig. 8. Extrinsic carcinoma of the larynx, involving epiglottis. Treatment of choice: total laryngectomy with neck dissection. Neck dissection, opposite side, 5 weeks after.

many are radiosensitive, radiotherapy is the treatment of choice in controlling the primary lesion and cervical node extension. X-ray irradiation is given to the nasopharynx and to the neck regions, regardless of the absence or presence of clinical involvement of this latter area. If, after tolerance to x-ray therapy is reached, recession of the primary lesion is not complete, then further irradiation with contact radium or interstitial radon is administered.

In the case of persistent cervical nodes after initial irradiation, further treatment of this type has been so unsuccessful that we are now considering seriously surgical removal of the cervical nodes, provided the primary lesion has receded completely and there is no evidence of distant metastases or osseous involvement adjacent to the primary nasopharyngeal lesion.

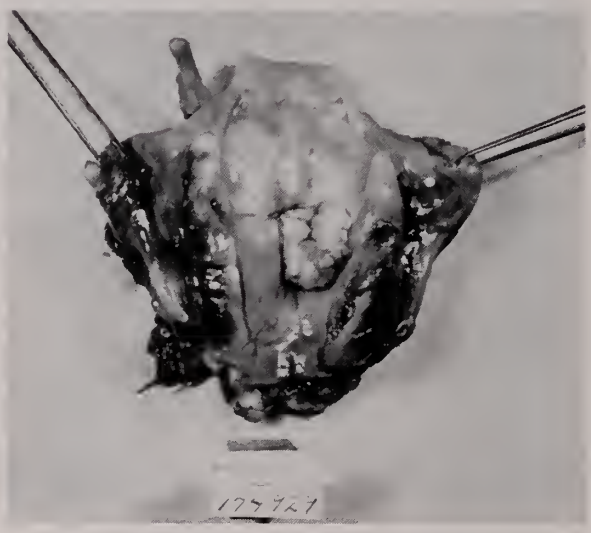


Fig. 9. Carcinoma of right vocal cord. Too extensive for local excision or irradiation. Treatment of choice: total laryngectomy with neck dissection. No significant sub-glottic extension.

Oropharynx: In this category, discussion is limited to carcinoma of the tonsil tissue, plus that of the pharyngeal wall immediately adjacent to the pharyngeal tonsils. Diagnosis should and could be, as a rule, made earlier in this group, in view of the accessibility of the area for examination.

The treatment of this type is primarily irradiation, as in the recommended therapy of similar lesions of the nasopharynx and cervical lymph nodes. However, since the results are so very unsatisfactory, particularly in the cases of well differentiated squamous cell carcinoma, there is a definite trend to attempt removal of the primary lesion and peripheral cervical nodes by continuity surgery. No difficulty is encountered in the removal of the cervical tissue,

but the extirpation of the primary lesion and adjacent tissue (partial pharyngectomy) offers real problems, especially in obtaining an adequate margin and in closing the wound, whether primarily, or by a secondary plastic procedure.

Irradiation remains the therapy of choice in the lymphomas.



Fig. 10. Total laryngectomy. Epidermoid carcinoma, fairly well localized to right vocal cord. Slightly too extensive for local excision. Also possible candidate for x-ray therapy in lieu of laryngectomy.

Hypopharynx: These lesions are in relatively "silent areas", and early diagnosis is practically impossible; consequently, carcinoma of the hypopharynx is seen primarily in a late stage of the disease, as a rule. Anatomically, this classification includes lesions of the pyriform sinuses, the lateral and posterior pharyngeal walls, and the very base of the tongue. As the treatment is essentially the same, we will include in this discussion the superior extrinsic carcinomas of the larynx, denoting those cases in which the neoplasm involves the false cord regions, arytenoids, aryepiglottic folds, pharyngo-epiglottic folds, and epiglottis.

Formerly, in the event that the lesion could not be circumvented by simple laryngectomy it was considered inoperable and radiation therapy was instituted. In view of the lack of success with this type of treatment, we now consider curative or palliative surgery as being the therapy of choice. Irradiation was given fair trial and found to be unsuccessful.

Very seldom may the neoplasm be removed by partial pharyngectomy only. In the vast majority of the cases, a laryngectomy is also necessary, even though the larynx may not be primarily involved. This procedure is required to obtain proper exposure of the neoplasm and closure of the wound. Also, a larynx crippled by adjacent radical surgery becomes a liability because of cough, dysfunction in deglutition, and persistent pulmonary infections. Obviously, if the larynx *per se* is involved, its removal is mandatory. In the event of extension to the upper esophagus, the procedure becomes a partial pharyngo-esophagectomy plus laryngectomy.

The removal of the primary lesion is accompanied by a neck dissection in continuity on the side of obvious cervical node involvement; or, if adenopathy is absent, a dissection on the side of the greatest advancement is performed. If the primary lesion is believed to have crossed the mid-line, a second neck dissection upon the opposite side, regardless of the presence or absence of recognized nodal involvement, is carried out, after an interval of four to six weeks.

Primary closure of the wounds is always attempted, and is usually successful. However, if this is not possible, then one or two methods of closure may be attempted, by utilizing free skin grafts attached to patterned metallic mesh or secondarily constructed skin flaps and tubes.

Bilateral obliteration of the jugular vein system of the neck, if an adequate period of time is permitted between operations, may be carried out with impunity. If a pharyngocervical fistula, which is not uncommon, does not develop after operation, it is surprising how rapidly these patients become ready for discharge from the hospital, and many for early return to their former occupations.

Larynx: Early diagnosis of carcinoma of the intrinsic larynx is possible and often accomplished. For some years, therapy of cancer of the larynx was considered as being almost entirely surgical. However, in recent years, evidence is mounting that radiotherapy may well become the treatment of choice for selected individuals, depending upon the location of

the tumor, age, and occupation of the patient. Certainly, lesions that qualify for local excision by an endolaryngeal procedure, or by laryngofissure (thyrotomy and excision), are also suitable for x-ray irradiation, particularly in the aged individual and one whose livelihood depends, to a great extent, upon a good voice. We have seen excellent results from irradiation, manifested by complete clinical disappearance of the cancer and a return of normal voice, in cases of pure cordal carcinoma who have been under observation for a period of from four to five years. If neoplastic activity recurs, then this group will be considered for nothing less than widefield total laryngectomy.

In the event that the laryngeal lesion is too extensive for local excision but still fairly well confined to the true cords, then there is a trend to perform the widefield total laryngectomy (pan-laryngectomy) —which includes the strap muscles, tissues of the pre-epiglottic space, and hyoid bone—rather than the former more limited type of laryngectomy. There is greater assurance as far as margin is concerned, and the patient's disability is unchanged by the widefield method.

Should the lesion extend posteriorly, involving the arytenoids, and upward to the false cord areas, or definitely sub-glottic, in view of the increased facilities for lymphatic extension, a neck dissection on the involved side has gained favor. If gross involvement of the cervical nodes is manifest, then obviously pan-laryngectomy with neck dissection is mandatory; but even in its absence there is a tendency to perform this procedure, in view of the fact that often involvement of the lymph glands is demonstrated upon microscopic examination, post-operatively. As in neoplasms of the hypopharynx, if the lesion crosses the mid-line, then neck dissection on the opposite side is considered, but not with the same degree of resolution as in the hypopharyngeal ones.

Our results following irradiation, in these more extensive cases of the extrinsic larynx, have been far from favorable; consequently, surgery is the therapy of choice. In our clinic, irradiation for a localized cordal lesion is permissible; for anything more extensive, surgery is advised.

Removal of the larynx does not produce the disability that one would expect. The majority of these patients are able to develop the smooth, pharyngeal speech which is even more satisfactory than the explosive, hesitant, esophageal speech, previously taught.

At one time, those cases of involvement of the trachea below the usual site of the tracheostomy (1-5 cartilaginous rings), or recurrent neoplasm below the site of the present tracheostomy, were considered rather hopeless. Now, however, the thoracic surgeons have come to our aid by splitting the sternum and establishing a transsternal tracheostomy at a lower level, thus permitting resection of the involved trachea.

Summary

Comments have been made upon the recent trend in treatment of the more common squamous cell carcinomas of the upper respiratory tract. In our particular group, palliation and pessimism are yielding to improved curative measures and optimism. This has been accomplished by the ability, for many reasons, to perform more extensive surgery in the attempted extirpation of the neoplasm and, to a lesser degree, by the developments and improvements in other methods of treatment, such as irradiation and biochemical therapy.

104 East Market Street.

New TV Shows This Fall.

The fall schedule for two network medical television programs being produced with the cooperation of the American Medical Association will get started in September. First, Ciba's new "Medical Horizons" show, a half-hour weekly TV series will be premiered over the ABC-TV network September 12, from 8:30 to 9 p.m. CDT. This documentary series will promote the American way of medical life by presenting specific accomplishments in the field of medicine as exemplified by the teamwork of modern medical research, education and practice. Featured will be live telecasts from medical institutions and research centers throughout the country.

The first of six shows in the 1955-56 series of "March of Medicine" programs, presented by Smith, Kline and French Laboratories, will be telecast, September 20 over the NBC-TV network. This show will replace Armstrong Cork Company, "Circle Theater," at 9:30 p.m. EDT.

A Fatal Case of Pseudomembranous Enteritis Following Tetracycline Therapy

DANIEL LEAVITT, M.D.
HORACE A. ALBERTSON, M.D
Roanoke, Virginia

ATTENTION has been called in the current literature to the increasing incidence of post-operative pseudomembranous enterocolitis.[1] It has also been suggested that the increasing incidence is related to an increase in antibiotic resistant micro-organisms as a result of the universal usage of these drugs. This condition has been reported in association with many of the antibiotics but to our knowledge it has not been previously reported following the use of the latest used broad spectrum antibiotic, tetracycline.

Recently, one of us with Trout[2] reported on 100 surgical patients treated with tetracycline and concluded that it was a good antibiotic to use in preventing and treating surgical infections. We found that only five per cent of the patients on this drug developed untoward reactions. There were two cases of mild skin rash and one mild exfoliative dermatitis. There was one case of severe but not fatal diarrhea. We cultured E. coli and Aerobacter aerogenes from the stools of this patient but no staphylococcus. Since this report we have had an unfavorable experience which we think should also be brought to the attention of physicians using tetracyline.

Case History

Mr. G.C.A., white male, age 52, was admitted to the Jefferson Hospital on 1/12/55. About 48 hours before admission he first experienced lower abdominal pain. Because of this he took a laxative and had several bowel movements. The last movement was 24 hours before admission. Since the onset, the pain had been gradually increasing in intensity and was localized to the right lower quadrant. There was marked involuntary muscle spasm over the entire abdomen.

The remainder of the physical examination was negative. White blood count was 16,100 with 92 per cent hemoglobin (13.4 grams). He was carried to the operating room immediately after having been seen by the surgical service. When the peritoneal cavity was opened about two ounces of pus gushed forth. The appendix was found to be perforated at its tip. There was a generalized peritonitis. A routine appendectomy was performed with double inversion of the stump. 600,000 units of penicillin and one-half gram of streptomycin were placed in the peritoneal cavity. A drain was placed down to the peritoneum but not into the peritoneal cavity. The patient was given 500 mg. of tetracycline intravenously immediately. A Levine tube was inserted and hooked to suction.

500 mg. of tetracycline twice a day were given on the first, second, and third post-operative day and 500 mgms. once a day on the fourth post-operative day. He was given 1½ ounces of castor oil the day after the operation and the following day he was given an enema which was effectual, and his nasal-gastric suction was discontinued. The fourth post-operative day he began to have loose stools and mild nausea. At first we thought the diarrhea was just over-coming of a mild paralytic ileus. He had some mild distension and because of this we had given him an ampule of 1:2000 prostigmine with a rectal tube every three hours. It was our feeling that the diarrhea was beneficial until the stools became so frequent they were debilitating. On the fifth post-operative day he was given two doses of 250 mg. of tetracycline by mouth. Because of vomiting this oral medication was discontinued, a Levine tube reinserted and 500 mg. of tetracycline mixed in with his intravenous fluids was given once that day. Then, since the patient's condition still seemed to be deteriorating, he was given 4 ml. of combiotic (penicillin 800,000 units and streptomycin 1 gram). His abdomen became greatly distended and his stools appeared to contain necrotic mucosa. His temperature went to 103 degrees, and early in the morning of the sixth post-operative day he went into shock. An electrocardiogram was negative. He was given vigorous supportive therapy consisting of intravenous fluids, dextran, blood, mephentermine sulfate, cortisone, and l-norepinephrine plus one million units of penicillin by intravenous drip. The patient's blood pressure finally came up to normal levels. We were afraid that the appendiceal stump had blown out; therefore, we decided to explore him again. Through a right rectus incision, the abdomen was

From the Departments of Surgery and Pathology, Jefferson Hospital, Roanoke, Virginia.
Received for publication May 5, 1955.

opened. The appendiceal stump was intact but the small bowel was tremendously dilated. An unsuccessful attempt was made to decompress it. When the suction tip was inserted into the small bowel it became clogged with yellowish white strands of material. This material was so abundant that it was impossible to decompress the bowel with either a catheter or a suction tip. Nothing definitive could be done. It was our feeling that the patient had a severe toxic enteritis and paralytic ileus. In spite of intensive supportive therapy, the patient died three and one-half hours post-operatively, six days after his first operation.

Autopsy showed the peritoneal cavity to contain 200 cc. of cloudy yellow fluid. The loops of small bowel were markedly distended and arranged in a stepladder fashion. Many were matted with fibrinous adhesions. The appendiceal stump was tight and healing, and the operative wound in the lower jejunum was tight, but the bowel was hemorrhagic for a distance of 10 cm. due to trauma at the second operation. There was ulceration and sloughing of sheets of mucosa throughout the jejunum and some sloughing and membrane formation in the ileum. The bowel contained thin brown fluid and shreds and sheets of membrane and mucosa. The large bowel contained similar matter but its mucosa was much better preserved. There was a pocket of green pus between two loops of terminal ileum which appeared to be older than elsewhere and, in fact, the bacteriology of this pus was different.

There was no evidence of generalized bacteriemia. The lungs showed only congestion and edema. The brain showed edema. There were no micro-abscesses. Sections of the jejunum showed marked necrosis of the mucosa with heavy neutrophilic infiltration. The submucosa showed congestion and a heavy round cell and plasma cell infiltration. The outer layers of the jejunum showed marked congestion and a slight round cell infiltration. The ileum showed a milder but similar process without necrosis. The colon showed inflammation in the serosa only.

Bacteriological studies showed the presence of a pure culture of Beta hemolytic Staphlococcus albus in the peritoneum and lumen of the bowel. The pus pocket at the terminal ileum contained Staphylococcus aureus and Alcaligenes fecalis. The sensitivity studies showed the Beta hemolytic staphylococcus albus to be resistant to tetracycline, oxytetracycline, polymyxin B, penicillin, dihydrostreptomycin and chlortetracycline. It was quite sensitive to erythromycin, chloramphenicol, bacitracin, and furadantin.

Discussion

Pseudomembranous entercolitis has been known since Finney reported the first case in 1893 following a gastric operation, but there has been a definite increase in the past five years. This increase in the incidence of this disease is thought to be coincident with the increase in the appearance of antibiotic resident strains of Staphylococcus aureus. Speare[4] states that in practically all recent reports of these cases pure cultures of strains of Staphylococcus aureus resistant to penicillin, streptomycin, oxytetracycline, and chlortetracycline have been found in the stools and intestinal tracts of these patients. In most cases the normal intestinal bacterial flora has been absent or depressed. Therefore, it is the feeling that the etiology of this frequently fatal complication is the massive invasion of the intestinal mucosa by antibiotic resistant strains of staphylococcus and by the absence of the normal flora known to act as an inhibitory influence on the growth of the staphylococcus.

The condition has been reported chiefly in patients following an abdominal operation, but has been reported even when not preceded by an operation.[5] However, the usual clinical picture is that of a patient who has successfully withstood an abdominal operation and who has done satisfactorily for a few days. He then begins to run a low-grade fever and have abdominal pain. Nausea, vomiting, and severe diarrhea then ensue. The temperature and pulse became elevated and shortly thereafter the patient goes into shock. He may respond for a while to vigorous supportive measures, but usually he succumbs in a period of hours or days. Generally before the patient dies, the diarrhea stops because of increasing paralytic ileus. These patients usually have some abdominal distension and generalized abdominal tenderness. Consequently, it is often hard to distinguish this condition from other post-operative abdominal emergencies. It must be distinguished from a leaking anastomosis, intestinal obstruction, blow-out of the appendiceal stump, etc. This can be done only if the condition is constantly kept in mind.

At autopsy, the findings are those of disease that can involve the entire gastrointestinal tract from the lower esophagus to the rectum. The small bowel is more frequently involved than the large bowel. It is usually found dilated and containing large amounts of cloudy yellowish-brown fluid. When the bowel is opened, the mucosa is found to be denuded and there are strands of gray or brownish-green diptheritic membrane partially attached to the denuded

bowel or floating loose in the liquid contents.

On microscopic examination, there is usually necrosis and polymorphonuclear leukocytic infiltration of the mucosa. The submucosa is engorged and infiltrated with lymphocytes and plasma cells. The muscularis and serosa are only rarely involved and rupture is uncommon.

In the past, the following drugs or combinations of drugs have been reported in connection with this disease: chlortetracycline, oxytetracycline, chloramphenicol, penicillin and streptomycin, and sufathalidine and streptomycin.[4] To our knowledge tetracycline, the newest of the widely used broad spectrum antibiotics, has not been reported in association with pseudomembranous enteritis.

Most of the cases in literature have reported Staphylococcus aureus to be the causative organism. In our case we found the pathogenic organisms to be beta hemolytic Staphylococcus albus. Otherwise, the clinical and pathological pictures were identical to those previously reported.

This case serves again to remind us of a potential danger in using any broad-spectrum antibiotic. It shows particularly that pseudomembranous enteritis can occur in connection with tetracycline therapy, a condition previously unreported.

To combat this particularly serious complication, Speare[4] has suggested that whenever diarrhea develops in a patient treated with antibiotics, a stool smear should be immediately examined. If gram-positive cocci are found the antibiotics being used should be immediately withdrawn and erythromycin substituted until sensitivity tests are completed. We feel that this is a reasonable regime and should be instituted whenever one suspects this condition.

Summary

Pseudomembranous enteritis, although reported in the pre-antibiotic days, is increasing in incidence with the widespread use of the broad-spectrum antibiotics. The condition is usually thought to be due to the elimination of the normal bacterial flora of the intestinal tract allowing an over-growth of Staphylococcus aureus. It has been reported previously following use of chlortetracycline, oxytetracycline, chloramphenicol, and penicillin-streptomycin and sulfathalidine-streptomycin combinations. This report is unique in that it presents a case which occurred following treatment with the newest broad-spectrum antibiotic, tetracycline. The case differed also in that the causative organism was hemolytic Staphylococcus albus.

Bibliography

1. Micrococcus Pseudomembranous Enterocolitis, A Complication of Antibiotic Therapy: Editorial, J.A.M.A., 157: 346-347 (Jan. 22) 1955.
2. Albertson, H. A., and Trout, H. H., Jr.: Tetracycline in the Prevention and Treatment of Surgical Infections. To be published in Antibiotics Annual, 1954-1955.
3. Quoted from Penner A., and Bernheim, A. I.: Acute Post-Operative Enterocolitis—A Study on the Pathologic Nature of Shock, Arch. Path., 27: 966-983, 1939.
4. Speare, G. S.: Staphylococcus Pseudomembranous Enterocolitis, a Complication of Antibiotic Therapy, Amer. J. of Surg., 88: 523-534 (Oct.) 1954.
5. Kleckner, M. S., Bargen, J. A., and Baggenstoss, A. H.: Pseudomembranous Enterocolitis Clinicopathologic Study of Fourteen Cases in Which Diseases Was Not Preceded by Operation. Gastroenterology, 21: 212-222, 1952.

New Pamphlet Series in Sex Education.

A series of five new pamphlets covering all aspects of sex education has been prepared and is now being distributed by the National Education Association and the A.M.A. Bureau of Health Education.

The pamphlets, selling for 50 cents each or $2.25 a set with discounts applying to quantities, were prepared by Marion O. Lerrigo, Ph.D., and Helen Southard, M.A., both of New York, with Milton J. E. Senn, M.D., New Haven, Conn., serving as medical consultant.

Titles of the new series and the period each covers follows: "Parents' Privilege," for parents of young children of pre-school and early school age; "A Story About You," for children in grades 4, 5, and 6; "Finding Yourself," for boys and girls of approximately junior high school age; "Learning About Love," for young people of both sexes, about 16 to 20 years of age; "Facts Aren't Enough," for adults who have any responsibility for children or youth that may create a need for an understanding of sex education.

Orders for one or more of the pamphlets may be sent to Mrs. Louise Goldman, Bureau of Health Education, American Medical Association, 535 North Dearborn St., Chicago 10, Ill.

Shortening of the Femoral Neck Following Fracture

DANIEL W. PRATT, M.D.
Charlottesville, Virginia

THE phenomenon of resorption of bone at the fracture line following an injury is a physiological fact that has been widely recognized. It is associated with several factors, the most common of which are movement at the fracture line, infection, and comminution with loss of bone substance. Yet, in the treatment of fracture through the femoral neck, the implications of this phenomenon have not been universally appreciated by those who are concerned with the repair of such injuries.

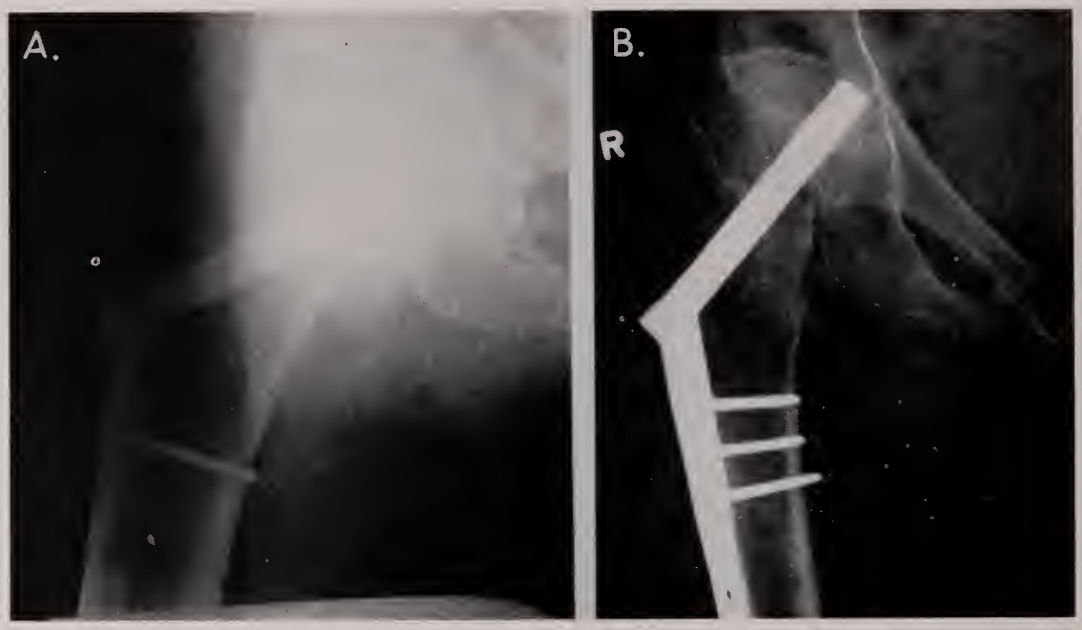


Fig. 1. A. Jewett nailing of a high neck fracture taken at operation.
B. View taken eight weeks post-operatively showing the result of anchoring the nail to the femoral shaft. As resorption occurred, the nail protruded into the acetabulum and required removal.

The femoral neck in the elderly patient is composed of a thin cortical tube of oval shape supported by a moderately dense internal trabecular structure. Following a fracture, the process of resorption begins, which is common, in variable degree, to all fractures. This is more aggravated in the femoral neck by the more fragile subcortical structure and often wafer-thin cortex which give a poor grip on the nail inserted to hold the parts together. There is a constant and strong pull from the muscle groups about the joint which tends to keep a pressure as well as shearing stress acting to carry the distal fragment into external rotation, varus position, and upward displacement. And, then, loss of bone substance or weakening of the bone by communition contributes its part to the process. The amount of resorption varies greatly and is difficult to predict, but it would appear to be dependent upon three factors, if only mechanical influences are considered. First is movement at the fracture line from insecure fixation. Second is the condition of fragile bony trabecular structure and the inability of the bone to hold an internal splint as well as to withstand the crushing and disintegration of bone along the broken edges from physiological pressures. Then, third, is the amount of bone crushed and lost through comminution at the time of injury. In those hips where the bone is too fragile or soft to give stability to the nail, the movement thus allowed caused a hyperæmic resorption with eventual loosening of the nail and shortening of the neck. Where the nail is poorly placed from the standpoint of mechanical advantage, or when several nail tracks have been created by repeated insertions, stress alone in such a loose fixation can cause the same thing by irritative resorption. Whatever the aggravating fac-

DANIEL W. PRATT, M.D., *Fellow in Orthopedic Surgery, University of Virginia Hospital.*

Received for publication May 12, 1955.

tors may be, a physiological resorption and shortening of the neck is often observed during the healing stage, which seems to be significant insofar as the choice of an internal spint is concerned. It was observation of this sequel that cast doubt on the wisdom of using a blade-plate combination in any fracture from the mid-neck to the sub-capital zone, for, if shortening is of significant degree, then the possibility of the nail rupturing into the acetabulum is a very real thing. Should the head, on the other hand, rotate off, such a nail could not then be extruded by the pressure of the rotating head or the wall of the acetabulum, and it would remain pointing into the joint space or capsule with much damage and pain.

To investigate the validity of this assumption, a group of cases was selected at random over a five-year period done by a variety of surgeons using the Smith-Peterson nail, Venable screws, and Jewett or McLaughlin blade-plates. No discrimination was made in evaluating the cases on the basis of their being Pauwels Type I, II, or III, but it was noted that almost all fell into the Type II category. The investigation was directed towards determining the amount of shortening that does occur during healing, or until a complication intervenes, such as a rupture of the nail out of the head, separation of the fracture, etc. Secondly, an attempt was made to evaluate the approximate time when shortening began and how long it continued; and, lastly, it was noted what was the ultimate fate of the fixation device. The information was gained by measuring the length of the femoral neck as it appeared in antero-posterior views taken at intervals after operation. Similar views with respect to variations in rotation were selected, and the known length of nails used was an aid in making measurements. Because of the fact that as marked degrees of rotation of the head sometimes occurred, those measurements of the greater degrees of shortening are much more inaccurate, and were often coincidental with complete displacement of the head which rendered a true measurement impossible. In all, thirty-two cases were measured. They were not chosen because of either good or bad healing, and the end-results are similar to those of many reported series.

Of the thirty-two cases, measurable shortening was found in twenty-four. In nine of these twenty-four the shortening amounted to ⅛ to ¼ inches, but in five it was ¼ to ½ inches. In ten it measured more than ½ inch, as is shown in the accompanying table. In view of the frequently associated complication of loss of reduction in this latter group, the measurements are not considered accurate in about half of them. In every case shortening was noticed by the eighth week, most of the change being apparent in six weeks. However, the process or shortening was seen to continue up to as long as sixteen weeks in six of the cases, but these were patients in which poor fixation and eventual non-union were seen. It was interesting to note that poor end-results were much more frequent in those hips where the greatest shortening occurred—about half the number so recorded.

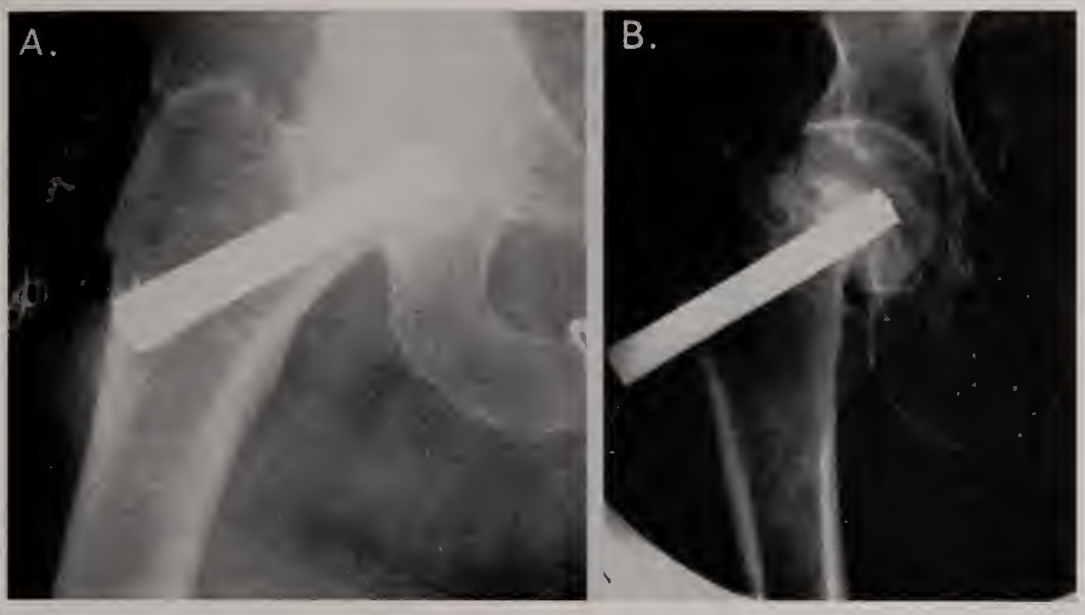


Fig. 2. A. Smith-Peterson nailing of a mid-neck fracture taken at operation.
B. View taken nine weeks post-operatively. Although a half-inch of shortening developed, the nail backed out a like amount without losing fixation, and this fracture went on to solid healing.

In eight cases no measurable resorption was visible, and all of these had healed well. A most significant fact from the standpoint of therapy was that among twenty-one of the twenty-four where shortening was found, the nail backed out commensurately with the shortening, unless, as in five of these cases a side-arm had been attached to the nail. The extrusion of the nail being equal to the shortening of the femoral neck, there was no loss of fixation since the nail retained its relative position in the neck and head. Certain of these did go on to rupture of the nail through the cortex superiorly due to the inability of the bone to hold the metal, but no device of the Smith-Petersen type nor Venable screw penetrated into the acetabulum. In the remaining three cases the nail did back out farther than the amount of resorption, and fixation was lost.

The conclusions from this small study are that fractures of the femoral neck can, in the majority of cases, be expected to undergo shortening of from ⅛ to ½ inches. The selection of a nail, screw, or pins must, therefore, anticipate this. It is unwise to anchor the distal end of a nail which will then prevent it from being extruded the appropriate amount as the femoral head settles upon it. If rupture of the nail occurs, a blade-plate has the further disadvantage of being forced into the acetabulum or capsule, causing damage and discomfort, whereas a simple nail will back out an amount that is usually equal to the shortening and still maintain fixation. Although we are far from an ideal mechanical answer to the problem, it is suggested that the use of a blade-plate above the level of the mid-neck invites complications, and the preferable type of fixation is an unanchored Smith-Petersen nail, Venable screw, Moore pins, or similar device which can accomodate to the physiological changes that occur during healing.

Measurable Shortening of the Femoral Neck Following Hip Nailing

Number of Cases	Inches of Shortening
9	⅛ - ¼
5	¼ - ½
10	½ plus*
Total 24	

*In this group rotation of the head and loss of reduction were seen in about half which rendered accurate measurements impossible.

Inadequate Diet Causes Less Anemia.

Anemia in persons living in a "backward rural area where the diet is notoriously deficient" appears to be less common than was expected, according to a survey reported in the July 9th American Medical Association Journal.

However, the majority of 90 cases of anemia were caused by iron deficiency and inadequate diet.

The survey was conducted by J. J. Kirschenfeld, M.D., and H. H. Tew, M.S., Fort Deposit, Ala.

Most of the patients were from Lowndes County, Ala. The basic industry is farming, and the important products are cotton, corn, peanuts, cattle, and wood. "The economic status of a large proportion of the population is rather precarious, but improving."

"The chief ingredients of the diet, especially in the Negro population, are corn, pork, lard, and vegetables such as potatoes, turnips, field peas, and collards. Fruit is rare, and beef, eggs, and milk are scarce. . . . To a large extent it is only in the summer months and in the fall that fresh vegetables are available."

Ninety of the 500 patients in the survey showed anemia, a total of 18 per cent. This compares with rates ranging from about 3 to 12 per cent in similar studies conducted in recent years in other areas of the country. Incidence of anemia was about 10 to 15 per cent in the white patient population and 20 to 25 per cent in the Negro population.

Inadequate diet caused 22.2 per cent of the cases, while excessive blood loss and pregnancy each caused 22.1 per cent. Other causes were acute and chronic infections and rheumatoid arthritis. Iron deficiency cases were based on indaequate iron intake, excessive iron loss or iron need due to growth, pregnancy, lactation, menstruation or other loss of blood.

"A large majority of the patients responded well to increased proteins in the diet, the addition of iron, and the correction of any excessive blood loss or infection."

Medical Reports on Industrial Cases

WM. MINOR DEYERLE, M.D., F.A.C.S.
Richmond, Virginia

ACCURATE medical reports containing the necessary information are required by the State Industrial Commission[65-98] and are a necessity for the doctor's records, as well as the records of the insurance carrier in any industrial case. A report must be filed in order to expect a fee from the insurance carrier[65-98]. The reports are sent to the Industrial Commission with a copy to the employer. The name and address of the carrier can be obtained from the employer or the Industrial Commission. There are 4 general types of reports that are required of the treating physician.

1. Attending physician's report
2. Progress reports
3. A report concerning the return to work
4. An estimate of permanent disability

First Physician's Report

This is usually written in triplicate on a form supplied by the State Industrial Commission (Chart I). There should be an accurate statement of how, when and where the accident occurred (quote the patient directly concerning this). If no accident occurred, there should be a clear statement of how, when and where the symptoms developed, and the patient should be specifically asked whether or not there was an accident and what he was doing at the time the initial symptoms occurred. The initial statement obtained from the patient is usually the most accurate concerning the onset of the condition. There is a requirement for estimation of possible temporary total in line 21 of the attending physician's report[65-51]. Then an estimate of the additional temporary partial disability in line 20 of the attending physician's report[65-52]. Both of these estimates should be made considering the patient's job and ability to return to light work. A careful estimate of any anticipated permanent disability should be noted in line 7 of the report. The disability may be permanent partial or so called "general disability"[65-52] or, in the case of extremities or the sensory organs, there may be a specific loss or a percentage thereof[65-53], or it may be both general and specific. The patient may have no anticipated permanent. It is realized that these estimates are no more than scientific guesses, but they should be set up as accurately as possible.

Progress Reports

At any time during the care of the patient, if there is a change of condition, these reports should be sent in duplicate. If surgery or any other change of treatment is indicated, this report should include a statement of length of hospitalization required, surgery needed, fee for surgery, and whether or not the surgery will affect the disability, temporary or permanent, with an estimate of the percentage of change. The amount of the bill should be determined by the amount of the bill for similar treatment in a similar community of persons of a like standard of living, when the treatment is to be paid for by the injured person[65-98]. The insurance carrier must furnish medical care for the first 60 days, and may be required by the Industrial Commission to furnish such care for the additional period of 10 months. In reference to progress reports, the physician is not infrequently confronted with a patient under his care who has previously made no reference to an on-the-job injury during the course of treatment. At some date later, he states that it was an on-the-job injury and requests a report. This can be handled satisfactorily by quoting the patient directly in your progress note, but explain to him clearly that your previous records show no information concerning the injury. Inform him that you will be glad to quote him as of the date he first mentioned the injury, and make any statement that he wishes in direct quotes, explaining to him, however, that if a report is required of you, you will give the initial history as he gave it, and you will also give this additional information, given at this later date. This usually puts the delayed recollection of an on-the-job injury in its proper perspective with the patient, insurance carrier and Industrial Commission.

Statement of Return to Work

This report must be a specific statement as to when, and what type work to which the patient may return. The patient should be encouraged to return to work as early as is compatible with good medical care. It has been shown when a patient returns to

Presented April 22, 1955 at the meeting of the Virginia Orthopaedic Society, Winchester.
Presented May 17, 1955 at the meeting of the Richmond Academy of General Practice, Richmond.
Received for publication May 4, 1955.

FORM NO. 6—

CHART I

The Use of This Form Is Required Under the Provisions of the Workmen's Compensation Act.

W. H. NICKELS, JR., COMMISSIONER
W. F. ROBINSON, COMMISSIONER
M. E. NUCKOLS, JR., COMMISSIONER

W. F. BURSEY, SECRETARY

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF WORKMEN'S COMPENSATION

INDUSTRIAL COMMISSION OF VIRGINIA

RICHMOND

Claim No._____

Case of_____

ATTENDING PHYSICIAN'S REPORT

All questions in this blank should be answered, and the report should contain an account of all injuries, no matter how trivial. Fill out blank in ink using pen or typewriter, and mail promptly to the Commission at its Richmond office.

The Patient

1. **Name of Injured Person:**_____ Age:_____ Sex:_____
2. Address: No. and St._____ City or Town_____ State_____
3. **Name and Address of Employer:**_____

The Accident

4. **Date of Accident**_____ Hour_____ M. Date disability began_____
5. State in patient's own words where and how accident occurred:_____

The Injury

6. **Give accurate description of nature and extent of injury and state your objective findings:**_____
7. Will the injury result in (a) Permanent defect?_____ If so, what?_____
   (b) Facial or head disfigurement?_____
   (Permanent disability such as loss of whole or parts of fingers, facial or head disfigurement, etc., must be accurately marked on chart on reverse side of this report.)
8. Is accident above referred to the only cause of patient's condition?_____ If not, state contributing causes:_____
9. Is patient suffering from any disease of the heart, lungs, brain, kidneys, blood, vascular system or any other disabling condition not due to this accident?_____ Give particulars_____
10. Has patient any physical impairment due to previous accident or disease?_____ Give particulars:
11. Has normal recovery been delayed for any reason_____ Give particulars:_____

Treatment

12. Date of your first treatment:_____ Who engaged your services?_____
13. Describe treatment given by you:_____
14. Were X-Rays taken?_____ By whom?_____ When?_____
15. X-Ray diagnosis:_____
16. Was patient treated by anyone else?_____ By whom?_____ When?_____
17. Was patient hospitalized?_____ Name and address of hospital:_____
18. Date of admission to hospital_____ Date of discharge:_____
19. Is further treatment needed?_____ For how long?_____

Disability

20. **Patient** was / will be **able to resume regular work on:**_____
21. **Patient** was / will be **able to resume light work on:**_____
22. **If death ensued give date:**_____

REMARKS: (Give any information of value not included above)_____

I am a duly licensed physician in the State of_____
I was graduated from_____ Medical School in_____ Year_____
Date of this report:_____ (Signed)_____
This report must be signed personally by physician. Address:_____ Telephone_____

COMPLETE THIS REPORT IMMEDIATELY AFTER SEEING PATIENT FOR THE FIRST TIME

some gainful occupation at an early date, there is not only a decrease in the temporary total, but also a decrease in the permanent disability to be reported later. It must also be borne in mind, however, that if the patient is sent back to work which he is unable to perform, it may be the cause of retarded recovery and further disability. If the patient refuses to return to work when the evidence, both medical and other factors such as the patient's education and training, shows that he is able, he may lose all compensation unless, in the opinion of the Industrial Commission, such refusal is justified[65-60]. It is, therefore, important to give definite instructions concerning the type of work that may be performed, considering his physical, mental and occupational capabilities. Sometimes this will be light work, and at other times it may be the patient's regular work. This report of return to work should also state whether or not additional medical treatment is necessary.

Permanent Disability

Before a patient has a final letter concerning his permanent disability, he should have reached a maximum medical recovery. The patient may be rated in 3 possible ways:

1. He may be totally incapacitated, in which event, he may be paid 60% of his wages, but not more than $27.00 per week up to 500 weeks, or up to a total of $10,800.00 for all compensation[65-51].

2. He may have a partial incapacity (general disability) during which he is paid 60% of the difference between the wages before injury, and the wages he is able to earn thereafter, but not over $27.00 per week. He is paid on this basis during both temporary and permanent partial disability. He can receive up to 300 weeks[65-52]. Since this loss of earning capacity must be actual, his physician can state only that he would anticipate a certain percentage of general disability, and that the actual loss of earning capacity will have to be computed by the Industrial Commission on a basis of the patient's earnings after his return to work. The physician's report should also state the type of work the patient can now perform, taking into consideration his education and training and physical condition.

3. In a specific loss of a member, or loss of one of his senses, as noted in the following excerpt from the Virginia Workmen's Compensation Act[65-53].

65-53. Cases in Which Incapacity Shall Be Deemed to Continue for Periods Specified in Section: Compensation

In cases included by the following schedule the incapacity in each case shall be deemed to continue for the period specified and the compensation so paid for such injury shall be as specified therein and shall be in lieu of all other compensation:

(1) For the loss of a thumb sixty per centum of the average weekly wages during sixty weeks.

(2) For the loss of a first finger, commonly called the index finger, sixty per centum of the average weekly wages during thirty-five weeks.

(3) For the loss of a second finger sixty per centum of average weekly wages during thirty weeks.

(4) For the loss of a third finger sixty per centum of average weekly wages during twenty weeks.

(5) For the loss of a fourth finger, commonly called the little finger, sixty per centum of average weekly wages during fifteen weeks.

(6) The loss of the first phalange of the thumb or any finger shall be considered to be equal to the loss of one-half of such thumb or finger and the compensation shall be for one-half of the periods of time above specified.

(7) The loss of more than one phalange shall be considered the loss of the entire finger or thumb; provided, however, that in no case shall the amount received for more than one finger exceed the amount provided in this schedule for the loss of a hand.

(8) For the loss of a great toe sixty per centum of the average weekly wages during thirty weeks.

(9) For the loss of one of the toes other than a great toe sixty per centum of the average weekly wages during ten weeks.

(10) The loss of the first phalange of any toe shall be considered to be equal to the loss of one-half of such toe and the compensation shall be for one-half of the periods of time above specified.

(11) The loss of more than one phalange shall be considered as the loss of the entire toe.

(12) For the loss of a hand sixty per centum of the average weekly wages during one hundred and fifty weeks.

(13) For the loss of an arm sixty per centum of the average weekly wages during two hundred weeks.

(14) For the loss of a foot sixty per centum of average weekly wages during one hundred and twenty-five weeks.

(15) For the loss of a leg sixty per centum of average weekly wages during one hundred and seventy-five weeks.

(16) For the permanent total loss of the vision of an eye sixty per centum of the average weekly wages during one hundred weeks; and for the permanent partial loss of the vision of an eye the percentage of one hundred weeks equivalent to the percentage of the vision so permanently lost.

(17) For the permanent total loss of the hearing of an ear sixty per centum of the average weekly wages during fifty weeks; and for the permanent partial loss of the hearing of an ear the percentage of fifty weeks equivalent to the percentage of the hearing so permanently lost.

(18) The loss of both hands, both arms, both feet, both legs or both eyes, or any two thereof, in the same accident, shall constitute total and permanent incapacity, to be compensated according to the provisions of 65-51.

(19) For marked disfigurement of the head or face resulting from an injury not above mentioned in this section which will impair the future usefulness or occupational opportunities of the injured employee sixty per centum of the average weekly wages not exceeding sixty weeks.

In construing this section the permanent loss of the use of a member shall be held equivalent to the loss of such member and for the permanent partial loss or loss of use of a member compensation may be proportionately awarded.

This specific award may be total, or may be proportionately awarded. In general, any loss of less than 5% is not reportable, and by the same reasoning, any loss of 95% should be reported as 100%. It is to be remembered that the percentage of loss is on a basis of industrial loss of function; as example, the removal of a torn knee cartilage produces a medical defect, but if the knee functions well enough to return the man to his former occupation without pain and discomfort, he should not be given a percentage of disability just because there is a cartilage missing and a scar on his knee. This type award is made only after maximum medical improvement, when, for the first time, it can be said that the loss of use is permanent. A patient may have permanent disability under both the second and third groups, however, he is never paid both at the same time, but is paid consecutively, first for the specific injury and then on the basis of wage loss for the general disability.

Bibliography

All references are from the Virginia Workmen's Compensation Act of 1951, amended in 1952 and 1954.

Discussion

Marvin Nuckols, *Commissioner State Industrial Commission*

For compensation purposes industrial injuries are divided into two classes, and compensated for on two entirely different bases. Where the injury is of a general nature, which includes injuries to the trunk, head, or functional disorders, related to accidental injuries or occupational disease, the measure of compensability is diminution in wage earning capacity. Medical evidence is not the sole criteria. There have been, and will continue to be, many cases where the medical evidence shows only a percentage of disability when in truth and in fact the disability so found renders the employee incapable of working and, therefore, incapable of earning any wage. The loss of earning power as the result of an injury of a general nature is not necessarily proportional to the bodily functional disability. When the physician first sees the patient he should determine whether the man is totally incapacitated for work. When the injury becomes static, that is to say, after maximum recovery has been had, the physician should then rate (medically) the disability (permanent) in percentages. Because the measure of compensability is wage earning capacity and not medical estimates of permanent disability, the physician should then ascertain the type of work in which the employee was engaged at the time of the accidental injury and express an opinion on the physical capacity of the injured employee to return to this type of work. If the physician concludes that the employee is so handicapped by reason of his injury that he can no longer engage in the trade or occupation in which he was engaged at the time of the accidental injury—and as you all know this is frequently so, as in the case of a carpenter who receives an injury to the cervical spine and is left with residual limitation of motion in the upper extremities which prevents him from working overhead or climbing—then the physician should express an opinion on the type of work in which the man is physically able to pursue. Consideration should be given to his training and education. If the injured employee, after maximum recovery is had, is by reason of his injury unable, in spite of diligent effort to obtain employment, it would be an abuse of language to say that he was still able to earn money; that he still had a capacity to work—even though his physical powers might be such as would enable him to do some kind of work if practically the labor market were not thus closed to him. He has became unable to earn anything. He has lost his capacity to work for wages to support himself—not by reason of any change in market conditions—but because of a defect personal to himself and which is the direct result of the injury he has sustained. He is deprived of the benefit which the statute promises to him if he is told that because he could do some work—if he could get it—he is not under an incapacity for work although by reason

of his injury he can obtain no opportunity to work.

The term "total incapacity" or "total disability" as used in the statute does not imply an absolute disability to perform any kind of work. It does not mean absolute helplessness, or entire physical disability. If an injured employee is disqualified by reason of his injury from pursuing the usual tasks of a workman in such a way as to enable him to procure and retain employment, he is, for compensation purposes, totally disabled.

The rule cuts both ways. If an injured employee with a medically rated permanent partial disability of a general nature as the result of injury, returns to work and earns wages in an amount equal to those received by him prior to his injury, he fails to make out a compensable injury or incapacity. The fact that he has a 20% or 25% permanent partial disability does not *per se* entitle him to compensation benefits.

(The English courts have adopted what has been called the "odd lot rule". That is, if by reason of the incapacity the employee's status on the labor market has been reduced to the relatively unsaleable "odd lot" of ability. Although the worker has some ability which he may offer for wages, if he is unable, in fact, to sell that ability—to find employment—and the failure is due to the limited ability, the wages which he is able to earn are reduced to zero.)

When considering the benefits under the Act for specific injuries, that is, injuries which result in a loss or loss of use of a bodily member—an extremity or component part thereof, or an eye, or loss of hearing—a different situation arises. Here compensation benefits are provided for and are fixed and payable regardless of loss of wage earning capacity—employability—or like consideration. The employee's benefits are usually gaged on medical estimates or percentage of permanent loss of use of the injured member. Benefits in such cases are regarded as indemnity for the loss or loss of use of the injured member.

Some consideration should be given to the phrases "total and permanent loss" or "loss of use" of a member. This language does not mean that the member is immovable or that it cannot be used in walking around the house or even around the block. They do mean that the injured employee is unable to use the member in any substantial degree, in *any* gainful employment, for which the employee is physically and mentally fitted. While the loss of a member necessarily involves the loss of use of it, the loss of a member does not necessarily involve the actual loss of the member as a physical member—a distinction the law recognizes and observes. The fact that the employee may perform work not requiring use of a injured member, and that he can walk without the use of a cane, crutch, or brace, when to do so causes him pain, swelling, inflammation, and further weakening of the member, does not show as a matter of law that he has not suffered permanent total loss of use of the member. So, in dealing with specific, or scheduled injuries, the physician should, when maximum recovery is attained, medically rate the injured member for percentage partial loss of industrial use.

I cannot impress upon you too strongly the necessity for being reasonably definite in medical reports. Questions of casual relationship between injury and accident and permanent disability should be determined within the realm of reasonable probability by the physician. The law realizes that the physician has no crystal ball and that the practice of medicine is not an exact science, and that these questions cannot be determined with absolute certainty. Such is not asked. We only ask that the physician express his views within the realm of reasonable probability.

Next, I would like to discuss with you briefly the matter of lump sum payments, and compromise settlements of workmen's compensation claims. I am advised that many physicians feel that lump sum payments in cases where objective findings or lesions cannot be demonstrated to account for complaints, and that functional factors are largely responsible for the disability, that such should be approved by the Commission as therapeutic measures. In a very small percentage of cases this is true. However, in the overwhelming majority the approval of a lump sum settlement is not only unwise, but is not to the best interest of the injured employee. I will give you my reasons for this statement in a moment.

I believe that those of you who have adopted this view have done so because you find it difficult to distinguish between the intentional malingerer, or compensationitis, and traumatic neurosis or psychosis. There is no doubt that such procedures would settle many problems both for the physician and for the Commission. However, it is my opinion that irreparable injury would be done to workmen in many cases, and for that reason such proposals are closely scrutinized. There have been and doubtless will be many cases in which the physician is unable to demonstrate pathology to account for subjective complaints, when in reality, there was, or is, an underlying pathological condition to account for them. If the workman enters into a compromise settlement his right to compensation is thereafter forever barred.

His right to medical attention or treatment is thereafter forever barred.

Most injured employees whose claims are considered by the Industrial Commission are unlettered workman. If their claims are compromised and they are paid the amount of the agreed settlement in a lump sum, this windfall is usually dissipated and thereafter the workman, if he is disabled, becomes a public charge upon the community. The purpose of workmen's compensation, which is to provide the injured worker and his dependents with a sustenance during his period of incapacity for work, as the result of industrial accident, is entirely defeated.

Compensation in the overwhelming majority of cases should be payable weekly or semi-weekly during the time the injured is unable to work, or able to work, while his earning ability or capacity is reduced. There is provision in the law for compromise settlements, with the approval of the Industrial Commission. However, the Legislature has provided that such agreements may be approved only when the Commission is clearly of the opinion that the best interest of the employee or his dependents will be served thereby.

As a matter of practice we approve compromise settlements and lump sum payments, but only in those cases where, in our judgment, the best interest of the employee and his dependents will be served. Such a case would be where an injured workman was incapable, by reason of his injury, from returning to laborious work, but wished to settle his claim in a lump sum in order that the funds might be used to purchase an interest in a small business of some kind and thereby enable him to become self-supporting again. However, I will again say that the Commission as a general proposition looks with disfavor upon lump sum settlements, and we wish that the physicians would, in their medical reports which are to be filed with the Commission as a part of the record, refrain from making such suggestions for the reason that the implication is that the patient is a malingerer.

Open Discussion of Medical Reports on Industrial Cases

Virginia Orthopaedic Society Meeting at Winchester

April 22-23, 1955

Moderator

Wm. Minor Deyerle, M.D., Richmond, Virginia

Panel

Marvin Nuckols, Industrial Commissioner
Richmond, Virginia

Roy Hoover, M.D., Roanoke, Virginia

L. W. Hulley, M.D., Advisor to the Industrial Commission
Richmond, Virginia

Dr. Hulley stated that there was some confusion concerning facial disfigurement; that a physician could state only whether or not marked facial or head disfigurement existed, and he should describe the length and type of scar, but that it was a matter for the Industrial Commisison to determine to what extent this disfigurement was compensable.

Dr. Hoover felt that 3 points should be mentioned:

1. The patient should be made to feel that he is being handled just as any other private patient, and not made to feel that because he is an Industrial case, he is being handled in a different fashion. The patient is very quick to perceive this difference, and his response to treatment and return to work can be very directly influenced by the relationship between the doctor and patient.

2. Dr. Hoover felt that the physician should at all times, in reports and testimony, bear in mind that he is a witness of fact and not an advocate. On occasions when he is called upon for his opinion, he should try to be as objective as possible.

3. Dr. Hoover also felt that in industrial cases, from a medical standpoint, the patient's rights are very well protected by the physician, Industrial Commission and insurance company, and that legal counsel for the patient was not very often required.

2222 Monument Avenue.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Poliomyelitis Vaccine

On April 12, 1955, it was announced that the vaccine developed by Dr. Jonas E. Salk had been successful in its use for the prevention of paralytic poliomyelitis. Following this the vaccine was released to the States by the National Foundation for Infantile Paralysis for administration to children in the first and second grades of schools and for booster doses to those who participated in the field trials of the vaccine in 1954. From April 18 through May 6 in Virginia 176,054 children were given the first dose of the vaccine.

Starting April 27, much confusion over the safety of the Salk Vaccine arose because of the appearance of poliomyelitis in other parts of the country in some children who had received vaccine prepared by the Cutter Laboratories. As a result of this incident the Surgeon General of the Public Health Service had withdrawn from the market all Cutter poliomyelitis vaccine. Investigation of production in all of the five pharmaceutical firms manufacturing poliomyelitis vaccine was instigated.

On June 10, the National Institutes of Health (NIH) announced that more stringent tests, including duplicate testing by the NIH, would be required of all polio vaccine manufactured for future use. A new Division of Biologic Standards with added staff and expanded facilities was set up in NIH and a committee of experts was appointed to pass on each lot of vaccine submitted for release. In addition, provision was made to have NIH inspectors attached to each plant that manufactures polio vaccine. These new policies and procedures should assure the safety and potency of poliomyelitis vaccine before it is supplied to the market.

On June 18, the National Foundation for Infantile Paralysis held a meeting at which were present its Vaccine Advisory Committee and representatives from the American Medical Association, American Academy of General Practice, American Academy of Pediatrics, American Public Health Association, Association of State and Territorial Health Officers, Public Health Service, and some special consultants. A full day's discussion of the use of polio vaccine during the summer was held and the following points were made:

1. The Salk Vaccine differs from materials like penicillin and pertussis vaccine in its possible paralysis-provoking effect because it is essentially a balanced salt solution with only a trace of protein. The purpose of the vaccine is to produce antibodies against polio while other injected materials have no such protective effect. A review of the experience in the field trials in 1954 and the use of the vaccine in the southern states in 1955, showed no evidence of provocation either in localization of paralysis in the injected limb or in increased incidence of paralytic disease.
2. Dr. Salk has stated that antibodies appear in 80 per cent of the children within 7-10 days after the first injection of the vaccine. Therefore, the danger of a provoking effect decreases after antibodies appear in measurable amounts. Apply this to the second injection and the protective response should be greater and more rapid than after the first injection.
3. Dr. Salk has shown that any measurable antibody has some effect in protecting against polio but the minimal levels necessary to prevent paralytic polio under various conditions are not known. There should be little risk of provoking polio in children who have recently received the first dose of injecting a subsequent dose.
4. There is scant evidence that injections of materials other than polio vaccine increase the risk of paralytic polio during epidemic periods.
5. No vaccine is 100 percent effective and some children given vaccine while polio is prevalent will have paralytic polio. If the vaccine is given during the incubation period it will not prevent the disease. Any possible risk of a provoking effect of the polio vaccine can be minimized by avoiding the vaccination of household contacts (the majority of whom are already infected) and of children presenting symptoms of acute infections or gastrointestinal upsets.
6. The opinion of the experts is that the total preventive effect of the vaccine in a period of

rising poliomyelitis incidence should be much greater than its paralysis-provoking effect.

On July 6, the Poliomyelitis Advisory Committee to the State Health Department, composed of members of the Poliomyelitis Committee of The Medical Society of Virginia, representatives of the State, City and County Health Departments, Virginia Academy of Pediatrics, Virginia Orthopedic Society, school physicians, Pharmaceutical Association, Department of Public Education and Virginia Branch National Foundation for Infantile Paralysis, met to consider the timing of the second dose of vaccine in the state. It was agreed that it would be wise to delay the administration of the second doses and the booster doses (for the 1954 field trial groups) until after the re-opening of the schools. This action was taken because of the belief that only 50 per cent or less of the eligible children would respond if called now and the administrative difficulties would be too great. Furthermore, by the time the vaccine became available and was administered the current polio season would be well advanced and protection afforded for this year would not be great. It was also the opinion of the Advisory Committee that any unfavorable reactions and any development of polio in the vaccinated group would not be properly interpreted by the public and that harmful effects would be attributed to the vaccine which would tend to destroy rather than build up confidence in the vaccine.

The State Health Department has been assured by the National Foundation for Infantile Paralysis that vaccine for second doses and for the 1954 field trial children will be available when requested this fall.

Morbidity Report of the Bureau of Communicable Disease Control

	July 1955	July 1954	Jan.-July 1955	Jan.-July 1954
Brucellosis	5	3	20	21
Diphtheria	2	1	16	26
Hepatitis-Infectious	59	190	805	2790
Measles	243	1113	3556	23159
Meningococcic Infections	5	5	66	74
Poliomyelitis	61	70	97	107
Rocky Mt. Spotted Fever	15	10	31	22
Streptococcal Infections	344	228	4798	3273
Tularemia	2	4	9	25
Typhoid Fever	7	2	25	30
Rabies (In Animals)	18	29	249	254

Low-Fat Diet—Coronary Disease Pain

A low-fat diet may be useful in helping to prevent angina pectoris, one of the most painful effects of coronary disease, two Philadelphia physicians said in the July 23rd Journal of the American Medical Association.

Angina pectoris, a severe pain in the chest, which carries with it a feeling of suffocation and impending death, is usually brought on by effort or excitement. Anginal pain following meals has been attributed to the increased heart work during digestion or to heart artery constriction resulting from a distended stomach. However, the two Philadelphia doctors suggested that the cause may be too much fat in the meal.

Fourteen patients with coronary disease at the Hospital of the University of Pennsylvania were given a fatty meal consisting of heavy cream, flavored with cocoa and synthetic sweetening. Six patients had a total of 14 severe attacks of angina pectoris from three to five hours after eating. Two other patients developed relatively mild and short attacks about five hours after eating. The patients said the discomfort was identical to that of effort-produced angina. Blood samples taken at intervals after the meal showed a steady rise in fat content, with the highest point reached about the time of the attack.

This slowly rising and prolonged fat concentration might explain why angina pectoris may occur in certain individuals after a certain meal of the day. It also might be partly responsible for angina decubitus, chest pain occurring when the patient is lying down.

Other tests showed changes in heart rate and a temporary deficiency of blood in the myocardium (heart muscle) during the attack. The doctors said that high fat concentrations, bringing about such a deficiency during the attack, could have a bad effect on the myocardium in persons whose circulation already is impaired by coronary disease. This is another good reason for giving a low-fat diet to patients with angina pectoris.

Making the survey were Dr. Peter T. Kuo, Hospital of the University of Pennsylvania, and Dr. Claude R. Joyner, Jr., National Heart Institute of the National Institutes of Health.

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

The Value of Chlorpromazine Hydrochloride and Reserpine in Relation to Other Methods Used in Treating Mental Illness

This brief article calls attention to certain aspects of the use of chlorpromazine hydrochloride and reserpine in relation to other forms of treatment for mental illness. Both drugs, under the trade names of THORAZINE* and SERPASIL,®† have been in use at Eastern State Hospital for some time and our experience with them is the basis for the following impressions.

Our evaluation of the clinical effect of SERPASIL on chronically ill mental patients has been directed toward determining whether this drug has an effect on the psychotic process itself, or is only of value in controlling symptoms. We have also attempted to estimate the extent of the symptomological effect and whether it is temporary or permanent.

In this project thirty six mental patients whose illness was of a chronic nature were observed over two periods of treatment of seven weeks' duration interrupted by a five-week period without treatment. During each seven-week period, SERPASIL was administered orally in doses of 2 mg. daily to half the group; the other half, given an equivalent placebo, served as the control group. Basing impressions on the psychiatric interviews only, the writer found no major changes in the psychotic processes in either group at the conclusion of the treatment periods. This examiner's initial impression, therefore, is that SERPASIL does not alter the course or process of chronic schizophrenia.

This medication has, however, a limited effect on the symptoms in that the patient finds it more possible to control and tolerate them while under this type of drug. The dosage of 2 mg. per day, it should be added, is considered too low; a dosage of 5 to 10 mg. daily starting with intravenous or muscular injections is recommended.

On the other hand disturbed patients of all categories can be handled more easily when under treatment with SERPASIL or THORAZINE and the patient becomes accessible for other means of treatment. The agitated senile patient, who is often physically feeble, undernourished and dehydrated, can be given much better nursing care under this medication so that dermatological problems can be cleared up and feeding more adequately handled. Our experience even leads us to believe that many senile patients could be cared for in their homes if properly treated with these medications.

Since our experience shows that all acutely disturbed psychotic patients can be controlled by brands of chlorpromazine hydrochloride and reserpine if the dosage is adjusted to their needs, we are able to treat delirium tremens, manic states and catatonic excitements through the use of these medications, and after controlling the disturbed behavior the patient, as stated above, becomes more accessible for other means of treatment. It is possible in selected cases to treat a manic patient on an ambulatory basis by giving him a tranquilizing drug in a dosage that controls his alarming symptoms. The patient may then be tolerated at home and electroshock treatment administered in an out-patient clinic. The use of these drugs may have a soothing effect on patients who are chronically disturbed and when the management is easier there is the possibility of additional treatment through occupational therapy or group therapy. Anxiety states in psychoneurotic patients may also be assuaged through the use of these drugs so that the patients are able to cooperate and respond to psychotherapy. In other words, our experience indicates that there is wide usefulness for these drugs as adjuncts to recognized methods of treatment for the mentally ill.

There is no reason to believe, however, that these drugs are substitutes for insulin shock or electroshock treatments. The pharmacological effect of both these drugs is understood to be on the autonomic nervous system, probably at the hypothalamic level and the effects of reserpine have been explained as alterations of the autonomic balance at this level of the midbrain. Such effects as sedation, reduced emotional response, differences in autonomic peripheral re-

Article prepared by THORBJORN LASSEN, M.D., *Staff Physician, Eastern State Hospital, Williamsburg, Virginia.*

*Thorazine—Trademark, Smith, Kline & French Laboratories

†Serpasil—Ciba Pharmaceutical Corporation

sponses and circulatory changes have been explained in this manner. This is of great interest, particularly in the treatment of schizophrenia, as this illness, according to current neurophysiological texts, is characterized by a deficiency reaction of the sympathetic division of the autonomic nervous system at the hypothalamic level and the mental changes correspond to those observed in disturbances of the hypothalamic function and the hypothalamic cortical relation. The different types of shock treatment for schizophrenia are believed to act on the centers of the autonomic system at the hypothalamic level by altering the mental processes through increased hypothalamic activity. Furthermore, it is believed that the full value of shock treatment is based upon these changes rather than upon the brain damage resulting from anoxia. On these loosely formulated hypotheses it is impossible to discuss any similarity in action of these varying treatments. On the other hand there is no basis for believing that one type of treatment can be substituted for another.

Under these circumstances it may be more valid to base judgment upon clinical evaluations. These drugs do not, as mentioned above, affect the processes of schizophrenia although they may have some effect upon the symptoms—for instance, permit the patient to tolerate certain symptoms more easily. Electroshock and insulin shock treatment not only quiet the patient and make him more manageable, but, in many cases, these treatments have a selective effect on the mental illness itself. The original cause of the illness may not have been removed, but, in many cases, the patient will be relatively free from symptoms over a long period after the treatments have been terminated and be able to make a satisfactory readjustment.

Likewise, states of acute manic depression and, to a lesser degree, acute catatonic excitement are responding to electroshock treatment in combination with coramine stimulation. It would, therefore, be inadvisable to substitute this treatment, which we know is effective, with THORAZINE and SERPASIL unless the latter medication were to be followed by other effective forms of treatment. In acutely disturbed patients, particularly delirium tremens, it would certainly be unwise to omit attention to fluid intake and properly balanced diets plus specific vitamin therapy. On the other hand, if a remission seems imminent or the state of excitement has reached a pitch where the patient is on the verge of collapse or exhaustion, it would be good practice to give THORAZINE or SERPASIL before these conditions develop.

Depressive states encountered in community practice and in psychiatric hospitals are usually accompanied by agitation and SERPASIL or THORAZINE, under such conditions, may be used to tranquilize the patient. The use of these drugs, however, will not change the patient's underlying condition. Electroshock, on the other hand, will not only control the agitation but also, in most cases, affect the depression itself and the patient may be expected to recover. Milder forms of depressive states may be treated by combining amphetamine with barbiturate preparations. There are also rauwolfia serpentina derivatives combined with amphetamine or similar stimulants which may be suitable for treating milder forms of depressive states.

In the treatment of psychoneurotic patients these drugs have no place except for the sedative effect they produce. Anxiety states may be controlled by the use of THORAZINE or SERPASIL and so make the patient more accessible to psychotherapy, but these drugs are, in no sense, substitutes for psychotherapy and most psychiatrists would be reluctant to have them used during periods when psychotherapy is being tried. The same comment applies to the use of these drugs when psychoneurotic patients are being treated by electric shock, non-convulsive electrostimulus or with carbon dioxide.

Some investigators feel also that SERPASIL and THORAZINE when used in the initial stage of treatment may produce a certain turbulence which can be used as a tool in effective psychotherapy.

Many physicians caring for mental patients have had the dream of finding a drug which would prove effective in the treatment of schizophrenia, the major problem in the field of psychiatry. Because this illness is believed to be a disturbance of the body as well as of the mind, its possible treatment by physical means—perhaps a simple chemical agent—has sustained this dream. We are all cognizant of the extensive and varied studies being made in many in many institutions for this country concerning the value of chlorpromazine hydrochloride and reserpine for schizophrenia and some of these workers feel that the above-mentioned drugs are a step toward the fulfillment of this dream.

The question has been raised as to whether these drugs could be substituted for psychosurgery. Usually lobotomy is considered in mental illness when adequate amounts of other types of treatment have failed, and until we learn otherwise, adequate treatment with chlorpromazine and reserpine should be included. It is this writer's opinion, however, that

these drugs are not likely to outclass prefrontal or transorbital lobotomy in well selected cases of chronically ill patients who have had a great amount of anxiety or for patients suffering from severe obsessive, compulsive states. That these drugs are quite expensive, if used in sufficiently high dosage over a long period, also plays a part in therapeutic planning for large state hospitals where electricity, at least, is to be had in spite of the low budgets available for medication.

New A.M.A. Drug Evaluation.

A new program to give physicians timely information on the usefulness and safety of new drugs has been announced by the Council on Pharmacy and Chemistry of the American Medical Association. The council's announcement, in the July 30th Journal of the American Medical Association, is the first in a series by A.M.A. councils on programs inaugurated to replace various "seal-acceptance" activities discontinued in February. The council will examine available published and unpublished evidence relating to the actions, uses, dosages, hazards, and other properties of drugs. It will not conduct clinical and laboratory tests. Reports of these evaluations will be published for the information of the medical profession.

For many years A.M.A. councils have evaluated products used by physicians and the public. In those programs, council seals were awarded to manufacturers and distributors of drugs, foods, devices, and cosmetics that met acceptance requirements.

"The evaluation of a multitude of individual brands, rather than classes of products, became so time-consuming that it threatened to interfere with the broader aspects of the council programs," an accompanying Journal editorial said. " . . . new and effective programs are being adopted by the scientific councils—programs that do not require the inspection of individual products or the issuance of seals."

The report by the Council on Pharmacy and Chemistry said:

"There is an increasing demand from the medical profession in general for concise and timely reports that contain an authoritative, unbiased evaluation of new therapeutic agents. . . . In this present era of rapid new developments in therapeutics, the work involved in processing for acceptance many different brands of a drug became cumbersome and time-consuming to the extent that physicians could no longer be provided with the type of service they desired.

"Under the new program drugs will be evaluated at the earliest possible opportunity in order to serve the best interests of the profession. As a rule the greatest interest in a new drug occurs at the time it is introduced on the market for general use. This is also the time when there is the most need for an unbiased report containing information that will aid physicians in judicious or proper use of such medication."

Pharmaceutical firms have been invited to cooperate with the council by forwarding complete data and reports of all laboratory and clinical investigations relating to new drugs so evaluation reports may be made at the earliest possible time.

After council members and other recognized experts have considered the scientific clinical and laboratory evidence, evaluation reports will be published in the Journal of the A.M.A. and in the council's annual publication, New and Nonofficial Remedies. Firms will be given an opportunity to comment on the reports before publication and due consideration will be given to their comments.

The council will not endorse, recommend, or guarantee any individual brand or preparation of a drug described in New and Nonofficial Remedies.

It will not investigate manufacturing procedures, nor try to determine whether any firm has complied with federal, state, or municipal laws and regulations.

Each drug evaluated by the council will be described by a common or non-brand name.

Book Announcements . . . .

Pomp and Pestilence. Infectious Disease, Its Origins and Conquest. By RONALD HARE, M.D., Professor of Bacteriology in the University of London at St. Thomas's Hospital Medical School. The Philosophical Library, Inc., New York. 1955. 224 pages. Cloth. Price $5.75.

Early Care of Acute Soft Tissue Injuries. Committee on Trauma. American College of Surgeons, Chicago, Illinois. First Edition. 1954. xiv-192 pages. Paper.

An Outline of the Treatment of Fractures. By The Committee on Trauma. American College of Surgeons, Chicago, Illinois. Revised and Amplified Fifth Edition. 1954. xiii-93 pages. Paper.

Management of Addictions. Edited by EDWARD PODOLSKY, M.D., Department of Psychiatry, Kings County Hospital, Brooklyn, New York. Philosophical Library, New York. 1955. xvii-413 pages. Cloth. Price $7.50.

The Care of Your Skin. By HERBERT LAWRENCE, M.D. Little, Brown and Company, Boston. 1955. xiv-95 pages. Cloth. Price $2.50.

Ion Exchange and Adsorption Agents in Medicine. The Concepts of Intestinal Bionomics. By GUSTAV J. MARTIN, Sc.D., Research Director, The National Drug Company, Philadelphia. Little, Brown and Company, Boston. 1955. vii-333 pages. Illustrated with 15 line drawings and 11 photographs. Cloth. Price $7.50.

Should the Patient Know the Truth. A Response of Physicians, Nurses, Clergymen, and Lawyers. Edited by SAMUEL STANDARD, M.D., and HELMUTH NATHAN, M.D. Springer Publishing Company, New York. 1955. 160 pages. Cloth. Price $3.00 (Hard Cover) or $2.00 (Soft Cover).

Perinatal Mortality in New York City. Responsible Factors. A Study of 955 Deaths by the Subcommittee on Neonatal Mortality. Committee on Public Health Relations, The New York Academy of Medicine, Analyzed and Reported by Schuyler G. Kohl, M.S., M.D., Dr. P.H. Published for The Commonwealth Fund by Harvard University Press, Cambridge, Massachusetts. 1955. xxi-112 pages. Cloth. Price $2.50.

Tea. A Symposium on the Pharmacology and Physiologic and Psychologic Effects of Tea. HENRY J. KLAUNBERG, Ph.D., Editor, Executive Director, The Biological Sciences Foundation, Ltd., Founder Member of the United States Committee of the World Medical Association; etc. The Biological Sciences Foundation, Ltd., Washington, D.C. 1955. 64 pages. Paper. Price $1.00.

The Reproductive System. The Ciba Collection of Medical Illustrations. Volume 2. A Compilation of Paintings on the Normal and Pathologic Anatomy. Prepared by FRANK H. NETTER, M.D. Edited by Ernst Oppenheimer, M.D. With a Foreword by John Rock, M.D., Clinical Professor of Gynecology, Harvard Medical School. Commissioned and published by Ciba Pharmaceutical Products, Summit, New Jersey. 1954. xvi-286 pages. Price $13.00.

This second volume of the Ciba Collection of Medical Illustrations is indeed a worthwhile part of the library of medical students, general practitioners, obstetricians, gynecologists, urologists, and surgeons. The excellent paintings by artist Frank Netter, not only depict the normal body and its gross pathology, but he also paints the normal and pathological microscopic findings as seen under both high and low magnifications.

The book is well organized into fourteen sections, each section containing adequate discussions by well known medical writers and clinicians as Drs. Albert Decker, Charles F. Geshickter, Robert A. Hingson, George W. Mitchell, Jr., Josef Novak, Somers H. Sturgis, and Samuel A. Vest.

Illustrated charts showing the hormonal influence on the body physiology are well utilized and are certainly an outstanding contribution to the section on the Normal Anatomy of the Female Genital Tract and Its Functional Relationship.

The finding of well written informative discussions adjacent to the illustrations are a definite aid to the reader who doesn't have to break his continuity of thought turning pages while he is studying a certain topic.

To the doctor, this book serves as a fine review, an excellent supplement to notes and standard texts, and as a useful device for explaining contemplated surgery, diseased conditions, or normal physiology to the patient.

JOSEPH B. KOHEN, JR.

Regional Allergy of the United States, Canada, Mexico, and Cuba. A Symposium of Thirty-nine Contributors. Edited by Max Samter, M.D., Chief, Allergy Clinic, Research and Educational Hospital, University of Illinois; Oren C. Durham, Lecturer in Allergy with Rank of Assistant Professor, University of Illinois College of Medicine, Chicago, Illinois; Chief Botanist, Abbott Laboratories, North Chicago; etc. Charles C. Thomas, Springfield, Illinois. 1955. 395 Pages. Illustrated. Price $8.50.

Inevitably practicing physicians are confronted with the question "What will this—my husband's transfer, our son's leaving for college in Texas, our father's moving to Florida—do to his allergy?". This book is designed to help answer that question. The problem is reviewed by one or more practicing allergists who are familiar with the picture as it exists in their particular region.

The book is divided into 34 chapters or regions. Each chapter contains information regarding the

geographical relief, climate, social structure, population characteristics, housing, heating, industries, pollen allergens, inhalant allergens other than pollens, and special local considerations of importance to allergic individuals. Extensive pollination tables or charts are given for each region.

The information is presented in a pleasing, easy to read fashion. In some sections the native-son-pride of the author passes the boundary of scientific objectivity with phrases certain to swell the heart of the local Chamber of Commerce. Rather than detracting from, this adds to the reading pleasure of the book.

This book is recommended for the reference shelf of all practicing physicians and should certainly be available in all medical libraries.

ADNEY K. SUTPHIN, M.D.

This Pace is NOT Killing Us. By J. I. RODALE. Rodale Books, Inc., Emmaus, Pennsylvania. 1954. 64 pages. Price $1.00.

As the author states this book is an attempt (by a layman) to answer the question: "Is the so called stress and strain of modern living the cause of the sharp increase in deaths from heart disease?" This is a short volume of 64 pages, there are 13 brief chapters which may be read in two hours time or less. The chapters are variously titled: I. A Dangerous Fallacy; II. Our Homes; III. Transportation; IV. Office and Factory; V. The Doctor; VI. Imaginary Confusion and Turmoil; VII. Statements by Physicians; VIII. Man Was Made To Move; IX. To Live Is To Move; X. Mental Tension; XI. Ulcers and Pigs; XII. Mass Malnutrition; XIII. Conclusion; Appendix, History of J. I. Rodale's Pulse; Appendix II. A Method of Reducing Pulse Through Diet.

It is obvious from a perusal of the chapter headings that the presentation is that of a faddist, with no effort on his part to catalog and discuss objectively the available pertinent evidence on this widely and popularly debated question. To get to the crux of the matter the author suggests a preventive regimen for one unafflicted with heart disease to avert an attack. He recommends: 1. A daily walk of gradually increasing distance; 2. The taking of Vitamin E which he claims is a specific for practically all heart cases; 3. The development of a slow pulse through daily exercise (as an aside the author quotes Drs. Hammond and Horn from the J. A. M. A. of August 7, 1954 that among persons with high pulse rate the number of deaths from cancer was about 60 percent above the expected). 4. The avoidance of the eating of figs, honeydew melons, whole wheat or fried foods of any kind. Branless whole wheat bread is advised. Coffee was found by the author not to affect the pulse.

The author, J. J. Rodale served as an accountant for seven years before entering the publishing business in 1932. He is the publisher of the Rodale Press, Editor and Publisher of *Organic Gardening*, President of Soil and Health Foundation of Allentown, Pennsylvania, and author of several word finders for crossword puzzle addicts, several gardening books, as well as several other pseudo-scientific medical books for the layman. (Sleep and Rheumatism, 1939, The Healthy Hunzas, 1948.)

It seems to the reviewer that the physician should be aware of this type of literature. This is an example of the type of book seized upon by the gullible, and uninformed and anxious public concerned about heart disease.

MARVIN BLEIBERG

Pomp and Pestilence. Infectious Disease, Its Origins and Conquest. By RONALD HARE, M. D., Professor of Bacteriology in the University of London at St. Thomas's Hospital Medical School. The Philosophical Library, Inc., New York. 1955. 224 pages. Cloth. Price $5.75.

The author has treated in an interesting manner the subject of endemics and epidemics amongst man from prehistoric times to present. He has followed the history of theories of disease and correlated the theories of their day with the management of infection.

The role of infectious disease in dictating the fates of nations and civilizations is illustrated with many examples that are different and presented in more detail than usually is found in such accounts. Direct quotations from official records and anecdotes of contemporaries make the reading of the history of pestilence in England particularly vivid and interesting. Considerable emphasis is placed upon the appalling filthiness of man, who, with but few lapses in times past, has just become clean in the western world as of today.

This book may be considered "popular" but deals soberly and accurately with a phase of history that should be familiar to both layman and physician.

H. J. WELSHIMER

Woman's Auxiliary . . .

President—Mrs. Maynard R. Emlaw, Richmond
President-Elect—Mrs. Mervin W. Glover, Arlington
First Vice-President—Mrs. Lee S. Liggan, Irvington
Second Vice-President—Mrs. Cecil C. Hatfield, Saltville
Third Vice-President—Mrs. Chas. A. Easley, Danville
Recording Secretary—Mrs. J. W. Carney, Newport News
Corresponding Secretary—Mrs. Levi W. Hulley, Jr., Richmond
Treasurer—Mrs. William C. Barr, Richmond
Parliamentarian—Mrs. Thos. N. Hunnicutt, Jr., Newport News

TENTATIVE PROGRAM
of the
Thirty-third Annual Convention
Richmond, Virginia October 16-19, 1955
Headquarters—Hotel Jefferson

Chairmen of Arrangements
Mrs. James R. Grinels
Mrs. George H. Snead

A cordial invitation is extended to all members of the Woman's Auxiliary to The Medical Society of Virginia, their guests and the guests of physicians attending the convention of The Medical Society of Virginia, to participate in all social functions and attend the general meetings of the Auxiliary.

Headquarters will be at the Hotel Jefferson. Luncheon tickets will be available at the registration desk only, and reservations will close at 10:00 a.m. on Tuesday. Please register early and obtain your badge and program.

Registration Hours

Sunday	October 16	5:00 P.M. to	7:00 P.M.
Monday	October 17	9:00 A.M. to	4:00 P.M.
Tuesday	October 18	9:00 A.M. to	10:30 A.M.

Monday, October 17

10:30 A.M. Pre-Convention Board Meeting—Washington Room, Hotel Jefferson
Mrs. Maynard R. Emlaw, President, presiding
All State officers, chairman, County Auxiliary presidents and presidents-elect are expected to attend. Members-at-large are also invited to attend.

3:00 P.M.—5:00 P.M. Tea—Valentine Museum, in honor of all members-at-large and County Auxiliary presidents.

Tuesday, October 18

9:15 A.M. Formal opening of the Thirty-third Annual Convention of the Woman's Auxiliary to The Medical Society of Virginia—Empire Room, Hotel Jefferson
Mrs. Maynard R. Emlaw, President, presiding
Invocation—Mrs. Hawes Campbell
Pledge of Loyalty to the Woman's Auxiliary to the American Medical Association
Address of Welcome—Mrs. George H. Snead, President, Woman's Auxiliary to the Richmond Academy of Medicine
Response—Mrs. Lee S. Liggan
Convention Announcements—Mrs. James R. Grinels
Roll Call—Mrs. J. W. Carney, Recording Secretary
Minutes of Thirty-second Annual Convention—Mrs. J. W. Carney
In Memoriam—Mrs. Fletcher J. Wright, Sr.
Presentation of Honored Guests—Mrs. Robert Flanders, of Manchester, N. H., President-Elect of the Woman's Auxiliary to the American Medical Association, and Mrs. Louis K. Hundley, of Pine Bluff, Ark., President of the Woman's Auxiliary to the Southern Medical Association
President's Report—Mrs. Maynard R. Emlaw
Reports of Officers
Reports of Chairmen of Standing Committees
Reports of Chairmen of Special Committees
Reports of County Auxiliary Presidents
(All above reports shall be limited to two minutes)
Report of Annual Convention of the Woman's Auxiliary to A.M.A., held in Atlantic City, June 6-10, 1955—Mrs. Richard M. Reynolds
Report of Registration—Mrs. Robert B. Lawrence
Unfinished Business
New Business
Recommendations from the Board
Report of Revisions Committee—Mrs. John R. St. George
Courtesy Resolutions—Mrs. Robert D. Keeling
Report of Nominating Committee—Mrs. Kalford W. Howard, Chairman
Election of Officers
Adjournment

Inaugural Luncheon

1:00 P.M.—Commonwealth Club
Mrs. Maynard R. Emlaw, President, presiding
Invocation—Mrs. Hawes Campbell
Presentation of Honored Guests
Luncheon
Guest Speakers:
Mrs. Robert Flanders, President-Elect. Woman's Aux. to A.M.A.
Mrs. Louis K. Hundley, President, Woman's Aux. to Southern Medical Association
Installation of Officers
Presentations of:
President's pin and gavel—Mrs. Maynard R. Emlaw
Past-President's pin—Mrs. Kalford W. Howard
Inaugural Remarks—Mrs. Mervin W. Glover
Convention Acknowledgements—Mrs. James R. Grinels
Fashion Show—Mrs. Randolph H. Hoge
Adjournment

Wednesday, October 19

8:30 A.M. Past Presidents' Breakfast—Mrs. Kalford W. Howard, Chairman
9:30 A.M. Post-Convention Board Meeting—Washington Room—Hotel Jefferson
Mrs. Mervin W. Glover, President, presiding
All State officers and chairmen. County Auxiliary presidents and presidents-elect are expected to attend. Members-at-large are also invited to attend.

PROGRAM

108TH MEETING

THE MEDICAL SOCIETY OF VIRGINIA

HOTEL JEFFERSON

RICHMOND

OCTOBER 16, 17, 18, AND 19, 1955

Sunday, October 16
1:00 P.M.
COUNCIL

7:00 P.M.
House of Delegates—Dinner Meeting

Monday Morning, October 17
9:00 A.M.

Section A—Ballroom

Carrington Williams, M.D., Richmond, Presiding

9:00 A.M.—Welcome and Preliminary Announcements—Presiding Officer

9:15 A.M.—PENICILLIN HYPERSENSIVITY—Oscar Swineford, Jr., M.D. and William P. Coleman, M.D., Charlottesville

A case of extreme hypersensitivity with shock following a scratch test with Penicillin and following injections of a variety of other drugs from syringes previously used for Penicillin injections. A brief review of Penicillin allergy is included.

9:35 A.M.—OTOLARYNGOLOGICAL MANIFESTATIONS OF ALLERGY—J. Warrick Thomas, M.D. Richmond

The close relationship of allergy and diseases of the upper respiratory tract, including the ears, are considered in addition to hay fever and perennial nasal allergy involving the nose and accessory sinuses.

9:55 A.M.—THE USE OF CORTISONE IN THE TREATMENT OF ARTHRITIS COMPLICATED BY DUODENAL ULCER—Mary C. Gray, M.D., Herndon

The case history is presented of a 72 year old white female with mixed arthritis complicated with duodenal ulcer, both producing severe symptoms. After one year of treatment with cortisone the patient is markedly improved.

10:15 A.M.—THE DIAGNOSIS OF CHEST PAIN—Paul D. Camp, M.D. and Herbert G. Langford, M.D., Richmond

An analysis of 100 cases of chest pain is presented, with emphasis on the value of careful and repeated study in their differential diagnosis. Selected cases illustrating diagnostic points will be presented.

10:30 A.M.
Recess to Visit Exhibits

11:00 A.M.—RUPTURE OF THE NORMAL AND DISEASED SPLEEN—James S. Berger, M.D., Norfolk

Traumatic rupture of the spleen is discussed. Discussion is based on 21 patients with ruptured spleen seen during the past seven years while in the service and in Norfolk and also on a detailed analysis of the literature of the last 50 years. Rupture of the diseased spleen is also discussed, especially in respect to infectious mononucleosis and malaria. An analysis is made and conclusions drawn.

11:20 A.M.—DIAGNOSIS AND SURGICAL TREATMENT OF ADRENAL GLAND PATHOLOGY—Austin I. Dodson, Jr., M.D., Richmond

Surgery of the adrenal glands has assumed considerable importance due to recent developments in adrenal physiology, diagnostic procedures and surgical technique. A brief summary of the major adrenal pathology is presented. Special emphasis is placed on the diagnosis and surgical treatment of the adrenogenital syndrome, Cushing's disease and pheochromocytoma.

11:40 A.M.—CHARACTERIZATION OF CERTAIN ENDOCRINE SYNDROMES BY SPECIFIC LABORATORY ASSAYS—Isabel Taliaferro, M.D., Richmond

The diagnostic aid derived from 17-ketosteroid, corticosteroid, and FSH determinations will be discussed. Pertinent data will be presented to illustrate the significance of these tests in patients having primary ovarian agenesis, pituitary insufficiency, Addison's disease, congenital adrenal hyperplasia, and Cushing's syndrome.

Section B—Flemish Room

James W. Love, M.D., Alexandria, Presiding

9:00 A.M.—Welcome and Preliminary Announcements—Presiding Officer

9:15 A.M.—THE DEGENERATIVE DISC SYNDROME—Allen M. Ferry, M.D., Arlington

The role of posture in the degenerative disc syn-

drome. Functional x-ray examination of value in diagnosis and treatment. The importance of the problem in modern day life and the part of the general practitioner and specialist in prophylaxis and treatment.

9:35 A.M.—Joint Manipulation in Private Practice—John McM. Mennell, M.D., Fishersville

In the belief that most physicians now recognize that there is a place for joint manipulation in the treatment of their patient's somatic complaints, this paper sets forth the indications and contra-indications for this form of therapy.

9:55 A.M.—Head Injuries in the General Practice of Medicine—I. S. Zfass, M.D. and H. S. Zfass, M.D., Richmond

Modern concepts of the diagnosis and management of craniocerebral trauma, with special reference to its importance in the general practice of medicine. A classification of head injuries. Special emphasis is given to the post-concussion syndrome and its medico-legal implications. Illustrative case material. (Lantern Slides).

10:15 A.M.—A Critical Review of the Value of Operative Cholangiograms—J. D. Adams, M.D., R. D. Noel, M.D., Clifton Forge

Operative Cholangiograms in bile tract surgery have reduced the number of choledochostomies and residual stones. It is a definite adjunct in effectively visualizing the common duct as to injury, reconstructive efforts or congenital anomalies.

10:30 A.M.

Recess to Visit Exhibits

11:00 A.M.—Pheochromocytoma—Case Report—James M. MacMillan, M.D., and Donald S. Daniel, M.D., Richmond

Pheochromocytoma is the appellation attached to chromaffin tumors of the medulla of the adrenal gland. An unusually large pheochromocytoma, a physiologically malignant tumor of the medulla and the adrenal, will be presented together with a summary of the physiology and pathology of the adrenal glands.

11:20 A.M.—Results Obtained by Operation Upon 100 Consecutive Cases of Deafness Due to Otosclerosis—Cary N. Moon, Jr., M.D., and Fletcher D. Woodward, M.D., Charlottesville

The experience and results obtained in the study and performing of the fenestration operation upon a group of one hundred patients who were deaf as a result of clinical otosclerosis.

11:40 A.M.—Club Foot Treatment and Results of Continuative Management—William M. Deyerle, M.D., and Carl J. Roncaglione, M.D., Richmond

Continuative club foot care enables the pediatrician and general physician to appreciate more the importance of early diagnosis and treatment. Indications for hospitalization and surgical intervention are more clearly defined and a more accurate prognosis can be offered to the parents and/or custodian. Duration of treatment is reduced and results are improved.

Monday Afternoon, October 17

2:30 P.M.

General Session—Ballroom

Waverly R. Payne, M.D., Newport News, Presiding

2:30 P.M.—The Relation Between Gall Bladder Disease and Heart Disease—Julian R. Beckwith, M.D., and J. Edwin Wood, M.D., Charlottesville

2:50 P.M.—Acute Pancreatitis—James O. Burke, M.D., Richmond

3:10 P.M.—Guest Speaker—Richard B. Cattell, M.D., Lahey Clinic, Boston—Advances in Pancreatic Surgery.

3:30 P.M.—Question and Answer Period

Annual Meeting of Virginia Medical Service Association will be held immediately following conclusion of General Session.

Monday Evening, October 17

8:30 P.M.

Ballroom

Call To Order—John P. Lynch, M.D., Richmond, Chairman, Committee on Arrangements

Invocation

Awarding of Certificates to Members in "Fifty Year Club"

Memorial Hour—James A. Thweatt, M.D., Chairman, Membership Committee

Address by President—Carrington Williams, M.D., Richmond

Address by Dr. Paul D. Sanders, Editor, Southern Planter

Tuesday Morning, October 18

9:00 A.M.

Section A—Ballroom

Benjamin W. Rawles, Jr., M.D., Richmond, Presiding

9:15 A.M.—Cushing's Syndrome—H. St. George Tucker, Jr., M.D., Isabel Taliaferro, M.D., and Frank A. Wade, M.D., Richmond

Six patients with Cushing's syndrome are presented. Two cases seen prior to the era of adrenal surgery died. With adrenal surgery the other four have been

relieved of the Cushing's state and restored to useful activity. Diagnosis and management are discussed.

9:35 A.M.—Malfunction of the Gastrojejunal Stoma Following Gastric Resection—Harry J. Warthen, Jr., M.D., Richmond

Malfunction of the gastrojejunal stoma following gastric resection is not uncommon. Failure of the anastomosis to function may persist for weeks or even months. Drastic surgery to overcome malfunction of the stoma must be avoided and the simplest procedure consistent with maintaining the nutrition of the patient should be carried out. An illustrative case will be described.

9:55 A.M.

Recess to Visit Exhibits

10:30 A.M.—Panel on Cardiac Surgery
Reno Porter, M.D., Richmond, Moderator
Lewis H. Bosher, Jr., M.D., Richmond
Thomas Johns, M.D., Richmond
William H. Muller, Jr., M.D., Charlottesville
J. Francis Dammann, Jr., M.D., Charlottesville

Section B—Flemish Room

OBSTETRICAL AND GYNECOLOGICAL SYMPOSIUM

Eugene S. Groseclose, M.D., Lynchburg—Presiding

9:15 A.M.—Ectopic Pregnancy—Selected Data from 100 Consecutive Cases—Brock Darden Jones, Jr., M.D., and Charles F. Whicker, M.D., Norfolk

9:35 A.M.—Menstrual Irregularity—William Bickers, M.D., Richmond

9:55 A.M.

Recess to Visit Exhibits

10:30 A.M.—Guest Speaker—Robert A. Ross, B.S., M.D., Professor and Head of Department Obstetrics and Gynecology, University of North Carolina School of Medicine, Chapel Hill, North Carolina—Omissions and Commissions in Maternal Mortality

11:00 A.M.—Panel Discussion
Abnormal Bleeding at the Menopause—Joseph C. Parker, M.D., Richmond
Hypofibrinogenemia in Pregnancy—Edwin Rucker, M.D., Richmond
Abnormal Uterine Bleeding During Pregnancy—Pembroke T. Grove, M.D., Winchester
Manual Exploration of the Uterus Following Delivery—Rufus P. Ellett, Jr., M.D., Roanoke

Report of Maternal Health Committee—H. Hudnall Ware, M.D., Chairman, Richmond

Tuesday Afternoon, October 18

2:30 P.M.

General Session—Ballroom

James W. Love, M.D., Alexandria, Presiding

2:30 P.M.—Guest Speaker—John deJ. Pemberton, M.D., Emeritus Staff, Mayo Clinic, Rochester, Minnesota—Surgical Management of Nodular Goiter

3:00 P.M.—Medical Management of Hyperthyrodism, Including Use of Radioactive Iodine—Kenneth R. Crispell, M.D., Charlottesville

3:20 P.M.—Question and Answer Period

4:00 P.M.

House of Delegates—Flemish Room

6:00 P.M.

Cocktail Party—Empire Room

7:00 P.M.

Banquet and Entertainment—Ballroom

Installation of James P. King, M.D., as President

Wednesday Morning, October 19

9:15 A.M.

Section A—Ballroom

Waverly R. Payne, M.D., Newport News—Presiding

Panel Discussion

9:15 A.M.—The Evaluation of Laboratory Procedures and Their Values
Edward Levy, M.D., Norfolk, Moderator
F. William Sunderman, M.D., Jefferson Medical College, Philadelphia
Jacob Weinstein, M.D., Washington, D.C.
G. Watson James, M.D., Richmond

10:45 A.M.—Ocular Signs of Systemic Diseases—E. G. Gill, M.D., Roanoke

There is no single examination which can give you as much information about the body as the examination of the eyes. This is the only place in the body where you can see the progress of a pathological lesion without a biopsy. There are many external ocular signs that should make the ophthalmologist suspicious of systemic disease in his patient; most of these are bilateral.

11:00 A.M.

Recess to Visit Exhibits

11:30 A.M.—Non-Specific Myocarditis—W. T.

Thompson, Jr., M.D., and Gordon R. Henningar, M.D., Richmond

This paper opens with a classification and general discussion of non-specific myocarditis. The pathology of non-specific myocarditis is described, followed by a discussion of etiology, with emphasis on idiopathic isolated (Fiedler's) myocarditis. The clinical features, course and prognosis of isolated myocarditis are given. A series of cases from medical literature is analyzed together with cases observed by the authors.

11:50 A.M.—Physiological Phenomenon Observed in Man Living at High Altitude—E. Lovell Becker, M.D., Richmond

Studies made at the Andean Institute of Biology on men living at 15,000 feet revealed changes in the cardio-vascular renal systems. Alterations were observed in the electrocardiograms, cardiac silhouettes, renal hemodynamics and body fluid electrolytes.

Section B—Flemish Room

Benjamin W. Rawles, Jr., M.D., Richmond, Presiding

9:15 A.M.—Ambulatory Electrocerebrotherapy in Industry and the Virginia State Penitentiary—H. Brick, M.D., and F. L. Finch, M.D., Richmond

A comparative study was undertaken of the effects of ambulatory electrocerebrotherapy. The results achieved among 68 tobacco factory workers and 72 prisoners indicate that the number of treatments necessary for remission can be reduced by 50% if treated during onset of symptoms.

9:35 A.M.—Experiences with Bleeding Gastric and Duodenal Ulcer—M. H. Todd, M.D., Coral Gables, Florida

In 170 cases of severe ulcer bleeding, 75% of patients has responded to medical management including transfusions; in those patients requiring emergency surgery, there are technical details which can reduce mortality.

9:55 A.M.—Wire Brush Planing for Post-Acne Scarring—Thomas W. Murrell, Jr., M.D., Richmond

The method of treating post-acne scarring with a rapidly revolving wire brush was introduced by Kurtin in 1953. Since that time a large number of dermatologists and others interested in this problem have used this method. Because of the operation's great potentialities and usefulness, this paper is presented. The procedure will be described in detail with photographs and moving pictures. Included will be pictures of a number of treated cases.

10:15 A.M.
Recess to Visit Exhibits

10:45 A.M.—Symposium on Convulsions

Walter Klingman, M.D., Charlotteville, Moderator

Drug Therapy—Cary Suter, M.D., Charlottesville

Diagnostic Value of the Electroencephalogram—James Funkhouser, M.D., Richmond

Convulsive Seizures of Childhood and Infancy—Harrison C. Spencer, M.D., Abingdon

Problem of Psychomotor Seizures and Surgical Treatment—John Kendrick, M.D., Richmond

Wednesday Afternoon, October 19
2:00 P.M.

General Session—Ballroom

Carrington Williams, M.D., Richmond, Presiding

2:00 P.M.—Medico-Legal Session on Professional Liability Insurance

Guest Speaker—Ernest C. Fisher, Jr., Claim Supervisor, Aetna Casualty and Surety Company, Richmond—Malpractice

Guest Speaker—Robert G. Butcher, Lawyer with Parrish, Butcher, Parrish and Hening, Richmond—Actions for Malpractice

Guest Speaker—A. Scott Anderson, Partner in the law firm of Bowles, Anderson and Boyd, President of the Richmond Bar Association—The Doctor as a Witness and his Obligation to the Court

Adjournment

Virginia Chapter of the American College of Chest Physicians

Hotel Jefferson, Richmond, Virginia

Sunday, October 16

Scientific Program, 2:00 P.M.

Medical Aspects of Carcinoma of the Lung—Dean B. Cole, M.D., Richmond.

Fungus Diseases of the Lungs—E. E. Menefee, Jr., M.D., Durham, N. C.

Modern Day Concept of the Treatment of Pulmonary Tuberculosis—William A. Hudson, M.D., Detroit, Mich.

Treatment of Childhood Tuberculosis—Edwin L. Kendig, Jr., M.D., Richmond.

Sarcoidosis—Modern Concepts—Edward S. Ray, M.D., Richmond.

Business Meeting, 5:00 P.M.

Recess

Cocktail Hour, 7:00 P.M.

Banquet, 7:30 P. M.

Program Committee
George A. Welchons, M.D., *Chairman*
William A. Apperson, M.D.
L. James Buis, M.D
Alfred L. Kruger, M.D.
Carl W. LaFratta, M.D., *Ex Officio*

SCIENTIFIC EXHIBITS

Jefferson Court and Mezzanine

Treatment of Infertility in Women—Mason C. Andrews, M.D., and William C. Andrews, M.D., Norfolk.

Blue Shield—M. Roy Battista and Thomas L. Martin, Richmond.

Application of Vascular Grafts—Lewis H. Bosher, Jr., M.D., and Alfred M. Decker, Jr., M.D., Richmond.

Conservation of Hearing—Neil Callahan, M.D., Norfolk.

Architectural Stress Patterns of the Femur, Radius and Tibia—Earnest B. Carpenter, M.D., Carl Roncaglione, M.D., and Juan Santos, M.D., Richmond.

Services of City Health Department—City of Richmond, Department of Health, Richmond.

Reconstructive Surgery of the Head and Neck—Claude C. Coleman, Jr., M.D., and Duncan McKee, M.D., Richmond and Charlottesville.

Radioactive Iodine in the Diagnosis of Thyroid Disease—K. R. Crispell, M.D., Guy Hollifield, M.D., William Parson, M.D., and Gerald Williams, M.D., Charlottesville.

Heart Disease and the Pulmonary Vascular Bed—J. Francis Dammann, Jr., M.D., and William H. Muller, Jr., M.D., Charlottesville.

Recent Advances in Gastro-Intestinal Tubes—John W. Devine, M.D., and John W. Devine, Jr., M.D.. Lynchburg.

Sciatic Tension Test—William M. Deyerle, M.D., and Virgil R. May, Jr., M.D., Richmond.

Treatment of Club Feet—William M. Deyerle, M.D., and Carl J. Roncaglione, M.D., Richmond.

Pediatric Urology—A. I. Dodson, Jr., M.D., and J. E. Hill, M.D., Richmond.

Getting Country Doctors—Edgar J. Fisher, Jr., Richmond.

Early Detection of Cancer of the Cervix—Clifford H. Fox, M.D., Charlottesville.

Modern Concepts in the Treatment of Chronic Alcoholism—Ebbe C. Hoff, M.D., J. David Markham. M.D., and Marvin C. Becker, M.D., Richmond.

Surgical Anatomy of the Mitral Valve. Meckel's Diverticulum—Thomas N. P. Johns, M.D., Helen Lorraine, and Frank S. Johns, M.D., Richmond.

Civilian Chest Injuries—Marcellus A. Johnson, III, M.D., Roanoke.

Effect of Cortisone on Tuberculous Meningitis and Pulmonary Tuberculosis—Edwin L. Kendig, Jr., M.D., Jack Choy, M.D., and William H. Johnson, M.D., Richmond.

The Diagnosis and Treatment of Focal Seizures—John F. Kendrick, M.D., Richmond, and Cary Suter, M.D., Charlottesville.

Dermatologic Treatment of Cancer—Carl S. Lingamfelter, M.D., and Allen Pepple, M.D., Richmond.

A Medicolegal Symposium—G. T. Mann, M.D., and G. W. Thoma, M.D., Richmond.

Chlorpromazine in the Treatment of Mental Disease—Department of Mental Hygiene and Hospitals—Joseph E. Barrett, M.D., Richmond.

Surgery of Arterial Diseases—William H. Muller, Jr., M.D., Charlottesville.

Recent Inovations in Endoscopic Instruments—W. E. Pembleton, M.D., and M. C. Shaffer, Richmond.

Services of the Medical Illustration Department—Anne Russell, Virginia Ingram, and Katherine Follmer, Charlottesville.

Plastic Surgery—Leroy Smith, M.D., and Hunter Jackson, M.D., Richmond.

Meniscus Injuries of the Knee—John S. Thiemeyer, Jr., M.D., Norfolk.

Evaluation of the Trial Vaccine for Poliomyelitis—Hart E. Van Riper, M.D., New York, N. Y.

Emergency Medical Services—Virginia Office of Civil Defense, Richmond.

The Electroencephalography—Head Injuries and the General Practice of Medicine—Isadore S. Zfass, M.D., H. S. Zfass, M.D., Edith Black, and Alvin M. Zfass, Richmond.

TECHNICAL EXHIBITS

Technical exhibits will be in Jefferson Court and on the Mezzanine. The following is a list of these exhibits with a brief description:

Booth No. 1

Schering Corporation

Bloomfield, New Jersey

A cordial invitation is extended to the members of The Medical Society of Virginia to visit the Schering exhibit. The entire exhibit will be devoted to METICORTEN and METICORTELONE, the new adrenocorticoids for the treatment of rheumatoid arthritis, intractable asthma and other so-called collagen diseases. Extensive clinical and laboratory data demonstrating certain advantages of these new steroids over cortisone and hydrocortisone are shown.

Booth No. 2

Peoples Drug Store, Incorporated

Washington, D. C.

Peoples Drug Stores, Incorporated, are deeply grateful to the physicians of Virginia for their continued cooperation and support. The members of The Medical Society of Virginia, in attendance at the annual meeting, are cordially invited to visit our booth. Representatives of our company will be on hand to greet you and furnish information concerning the professional services offered to physicians.

Booth No. 5

Mead Johnson & Company

Evansville, Indiana

New displays of Liquid Lactum and Powdered Lactum, complete infant formulas, will be featured at the Mead exhibit. Also on display will be Liquid Sobee, the hypoallergenic soya formula, Sustagen, the complete food and Natalins, the smaller prenatal capsule.

Booth No. 7

The Dominion Laboratories

Richmond, Virginia

The medical profession is cordially invited to visit this space where Dominion's exhibit will be attended by a representative. He will be pleased to have you make requests, receive samples, and literature and discuss our specialties, ALLVITA, BARBAMIN . . .etc.

Booth No. 8

The Coca-Cola Company

Atlanta, Georgia

Ice cold Coca Cola served through the courtesy and cooperation of the Richmond Coca-Cola Bottling Works, Incorporated, and The Coca-Cola Company.

Booth No. 9

A. S. Aloe Company

Washington, D. C.

Booth No. 10

Pet Milk Company

St. Louis, Missouri

We will be pleased to have you stop and discuss the variety of time-saving material available to busy physicians. Our representatives will be on hand to discuss the merits of "Pet" Evaporated Milk for infant feeding and INSTANT "Pet" Nonfat Dry Milk for special diets. A miniature "Pet" Evaporated Milk can will be given to all visitors.

Booth No. 11

Doho Chemical Corporation

New York, New York

Doho Chemical Corporation is pleased to exhibit: AURALGAN, the ear medication for the relief of pain, Otitis Media and removal of Cerumen; New OTOSMOSAN, the effective, non-toxic ear medication which is Fungicidal and Bactericidal (gram negative-gram positive) in the suppurative and aural dermatomycotic ears; RHINALGAN, the nasal decongestant which is free from systemic or circulatory effect and equally safe to use on infants as well as the aged.

Mallon Chemical Corporation, subsidiary of the Doho Chemical Corporation, is also featuring: RECTALGAN, the liquid topical anesthesia, also for relief of pain and discomfiture in hemorrhoids, pruritus and perineal suturing; DERMOPLAST, in an aerosol freon propellent spray for fast relief of surface pain, itching, burns and abrasions. Also obstetrical and gynecological use.

Booth No. 12

VanPelt and Brown, Incorporated

Richmond, Virginia

VanPelt and Brown extend a cordial invitation to visit their exhibit where representatives will be happy to answer questions and supply clinical samples of their products.

Booth No. 13

Lederle Laboratories Division

American Cyanamid Company

New York, New York

Booth No. 14

Wm. P. Poythress & Company, Incorporated

Richmond, Virginia

The mild sedative, SOLFOTON, and the antiasthmatic,

MUDRANE, will be featured at the Poythress exhibit. Physicians attending the meeting are cordially invited to visit this booth where information, literature and professional samples of all Poythress specialties will be made available for the asking.

Booth No. 16

The Stuart Company

Chicago, Illinois

Your local Stuart representatives issue a cordial invitation to visit their booth. They will have two new Stuart products on display—SULADYNE, a more complete product for the treatment of urinary tract infections, and MULVIDREN, a unique product for children.

Booth No. 17

Ayerst Laboratories

New York, New York

The Ayerst exhibit will feature THIOSULFIL brand of sulfamethylthiadiazole for use in the treatment of urinary tract infections. Physicians are cordially invited to visit this booth where Ayerst representatives will be on hand to welcome you and to discuss any Ayerst specialties in which you may be interested.

Booth No. 18

Powers & Anderson, Incorporated

Richmond, Virginia

Booth No. 19

Tablerock Laboratories

Greenville, South Carolina

Booth No. 20

R. J. Reynolds Tobacco Company

Winston-Salem, North Carolina

Welcome to the R. J. Reynolds Tobacco Exhibit! You are cordially invited to receive a cigarette case (monogrammed with your initials) containing your choice of CAMEL, CAVALIER King Size, or WINSTON, the distinctive new king size filter cigarette.

Booth No. 21

Meridian Electronics, Incorporated

Richmond, Virginia

Exhibit and demonstration of office intercommunication systems and high fidelity music systems. "Rent-a-Call" sound systems.

Booth No. 22

Davies, Rose & Company, Limited

Boston, Massachusetts

It is with pleasure that we again have the opportunity to bring our products to the attention of the members of The Medical Society of Virginia.

Among our laboratory products, Pil. Digitalis and Tablets Quinidine Sulfate (Natural) have won the confidence of the cardiologist who knows that he can always rely on their constant and dependable potency.

Our representative, Mr. Frederick L. Moulton, will be in attendance to welcome you and to discuss these outstanding cardiac therapies as well as the serviceability of our other preparations.

Booth No. 23

Charles C. Haskell & Company, Incorporated

Richmond, Virginia

The Haskell Company's ethical prescription specialties, BELBARB (antispasmodic, sedative), HASAMAL (analgesic), SILMIDATE-M (analgesic, muscle relaxant), QuerSerpin (tranquilizer, antihypertensive) will be exhibited. Our representative will be present to welcome physicians and discuss any questions they might have.

Booth No. 24

M & R Laboratories

Columbus, Ohio

Your Similac representatives are happy to take part in this meeting. They are pleased to have the opportunity to discuss with you the role of Similac in infant feeding. They have for you the latest Pediatric Research Conferences. Also available are current reprints of pediatric nutritional interest.

Booth No. 25

The Baker Laboratories, Incorporated

Cleveland, Ohio

You are invited to visit our booth where Baker's Modified Milk and Varamel, two successful products for infant feeding, are on display.

Baker representatives will be glad to discuss the practical application of Grade A milk, adjusted fat composition, zero curd tension, synthetic vitamins and other important factors which help to eliminate many of the problems in modern infant feeding.

Booth No. 26

Physicians Products Company, Incorporated

Petersburg, Virginia

We will display the seasonal preparations currently being detailed to the medical profession by the members of Physicians Products Company.

Booths No. 27 and 28

Pepsi-Cola Bottling Company

Richmond, Virginia

Booth No. 29

Smith, Kline & French Laboratories

Philadelphia, Pennsylvania

The S.K.F. booth will feature the latest clinical information about the remarkable new drug—THORAZINE*

—and its many and varied uses. These uses include potent anti-emetic action, potentiation of other drugs, and its unique and dramatic applications in the field of mental and emotional problems.

Booth No. 31

E. R. Squibb & Sons

New York, New York

*Thorazine—Trademark, S.K.F.

Booth No. 32

Winthrop-Stearns, Incorporated

New York, New York

MONODRAL—is a new, well tolerated, synthetic anticholinergic for peptic ulcer (gastric and duodenal), hyperacidity, phyloospasm, spastic and irritable colon. Monodral has unusual gastric antisecretory power, producing temporary anacidity in many patients.

MILIBIS SUPPOSITORIES—highly effective specific against trichomonal, monilial, bacterial (mongonococcal) and mixed vaginitis.

Booth No. 34

Walker Laboratories, Incorporated

Mount Vernon, New York

PRECALCIN and PRECALCIN LACTATE will be featured at the Walker booth. PRECALCIN is the original dietary adjunct supplying comprehensive vitamins and minerals for use during pregnancy and lactation. The new PRECALCIN LACTATE product is the same as the original PRECALCIN except for the source of calcium which is the lactate instead of the phosphate. By providing both forms, the doctor may have his choice of calcium sources to suit individual patient requirements.

Booth No. 35

Eli Lilly and Company

Indianapolis, Indiana

You are cordially invited to visit the Lilly exhibit. The display will contain information on recent therapeutic developments. Lilly sales people will be in attendance. They welcome your questions about Lilly products.

Booth No. 36

U. S. Vitamin Corporation

New York, New York

Our exhibit will feature ARLIDIN, a new vasophoric, brand of Nylidrin HCl. ARLIDIN, a pharmacologically active sympathomimetic drug, provides prolonged vasodilatation, increases cardiac output and peripheral blood flow. ARLIDEN is indicated for treatment of a wide range of functional and obliterative peripheral vascular disorders.

Professional samples and literature will be distributed by our sales representatives on our complete line of nutritional specialties.

Booth No. 37

C. B. Fleet Company, Incorporated

Lynchburg, Virginia

During the past fifty years PHOSPHO-SODA (Fleet) has been a symbol of elegance in sodium phosphate medication. FLEET ENEMA DISPOSABLE UNIT—an enema solution of Phospho-Soda (Fleet) is a worthy companion product. The single use unit simplifies and assures satisfying preparation for proctoscopy and as a routine enema it is a boon to the hospitalized patient.

Booths No. 38 and 39

The American Tobacco Company

Richmond, Virginia

The exhibit of the Research Laboratory of The American Tobacco Company will feature a new electrical device for rapid determination of moisture in tobacco. This meter was developed by our instrument division and records moisture content directly by automatically compensating for temperature variations.

Errors encountered in manually operated instruments are eliminated thereby resulting in closer control of quality in LUCKY STRIKE, PALL MALL and HERBERT TAREYTON cigarettes.

Booth No. 40

G. D. Searle & Company

Chicago, Illinois

Booth No. 41

Zimmer Manufacturing Company

Warsaw, Indiana

Be sure to visit the Zimmer booth. We have the new, revolutionary, accepted material DUROCEL for padding under plaster cast, leg ulcers, etc. We also have a complete line of orthopedic and fracture appliances. George and Harley Baxter will be on hand with Bill Peele, our Virginia representative.

Booth No. 42

Sandoz Pharmaceuticals

Hanover, New Jersey

SANDOSTEN—An antihistaminic with powerful antipermeability action useful in the treatment of itching, asthma, etc.

FIORINAL—A new approach to therapy of tension headaches and other head pain due to sinusitis and myalgia.

CAFERGOT—Available in oral and rectal form for effective control of head pain in migraine and other vascular headaches.

HYDERGINE—A vasorelaxant with central and peripheral action useful in hypertension and peripheral vascular disorders and geriatric conditions.

Any of our representatives in attendance will gladly answer questions about these and other Sandoz products.

Booth No. 43

Abbott Laboratories

North Chicago. Illinois

A topical anesthetic with a low index of sensitivity, TRONOTHANE®, (pramoxine Hydrochloride, Abbott), will be among the new products exhibited by Abbott Laboratories. TRONOTHANE is unique in that it is unrelated chemically to the "caine"-type anesthetics. Abbott will also exhibit ERYTHROCIN (erythromycin, Abbott), the direct-acting antibiotic which provides specific action against cocci infections and minimal risk of side effects. Also to be exhibited will be the non-caloric sweetener SUCARYL (Cyclamate, Abbott), Abbott's complete line of intravenous solutions and SELSUN (Selenium Sulfide, Abbott), for control of dandruff-producing seborrheic dermatitis. PENTOTHAL SODIUM, ultra-short-acting barbiturate for intravenous anesthesia; DICALETS, new vitamin and mineral tablet for pregnancy and lactation; OPTILETS, high-potency therapeutic multi-vitamin tablet; and VI-DAYLIN, a homogenized mixture of seven vitamins.

Booth No. 44

The National Drug Company

Philadelphia, Pennsylvania

Booth No. 45

Richmond Surgical Supply Company

Richmond, Virginia

We shall have on display the latest in medical equipment to include the new revolutionary, self-calculating Basal Metabolar.

Booth No. 46

Ortho Pharmaceutical Corporation

Raritan, New Jersey

Ortho cordially invites you to visit their exhibit. The Ortho display will feature PRECEPTIN® vaginal gel, their product for conception control designed for use without a vaginal diaphragm. Preception vaginal gel has achieved an outstanding record of clinical effectiveness and has been widely acclaimed by the medical profession. Your inquiries on Preceptin vaginal gel are invited.

Booth No. 47

Ciba Pharmaceutical Products, Incorporated

Summit, New Jersey

The Ciba exhibit features SERPASIL—the original, pure crystalline alkaloid of Rauwolfia. SERPASIL has been found extremely useful as a tranquilizer in treating patients whose adjustment to life is completely by anxiety, irritability and various psychoses. Patients feel calm, yet in properly adjusted doses retain their drive and energy. It is highly effective in many conditions where barbiturates have been commonly prescribed.

Booth No. 48

A. H. Robins Company, Incorporated

Richmond, Virginia

Physicians attending the meeting of The Medical Society of Virginia are extended a cordial invitation to visit the exhibit of the products of the A. H. Robins Company. Experienced medical representatives will be in attendance to welcome you and answer inquiries relative to any of Robins' prescription specialties.

Booth No. 49

The Borden Company

New York, New York

There's no better place to talk over the latest information on infant feeding than the Borden Prescription Products booth. On display is the complete line of Borden infant formula products for every feeding purpose or preference. If you're encountering hyperirritability or excoriation, you'll be interested in BREMIL, a formula patterned upon breast milk. If you suspect milk allergy in some of your patients, you'll find the answer in either liquid or powdered MULL-SOY, leading hypoallergenic food. For prematures, or for digestive disturbances demanding low fat and high protein, DRYCO provides an ideal, flexible formula base. And if your preference is for liquid products, you'll want the latest facts about BIOLAC.

Booth No. 50

W. B. Saunders Company

Philadelphia, Pennsylvania

Earl Dunham will be on hand again with our latest line of clinical books. Among the newest of special interest are: Williamson—Office Procedures; Cardiovascular Surgery from the International Symposium at the Henry Ford Hospital; Modell—Relief of Symptoms; Cecil-Loeb—Textbook of Medicine; Rushmer—Cardiac Diagnosis; Williams—Endocrinology; and Cowdry—Cancer Cells.

These together with our complete line will be displayed.

Booth No. 51

Burroughs Wellcome & Company (U.S.A.) Inc.

Tuckahoe, New York

President's Message . . . .

The 1955 Meeting

DURING the past year giant strides have been taken to eliminate segregation of the races. In our Society, it was decided at the last meeting to eliminate the word "white" from our Constitution and 10 local societies have so changed their Constitutions. We now have 21 Negro members of The Medical Society of Virginia.

There has been and still is a very considerable opposition to this change and it will take a long time to adjust the feelings of both races to the new order. All of us should look backward and consider the many social changes and new customs that have taken place during the relatively short life of our United States. The standards of living and the opportunities for success have been increased by leaps and bounds. The socialistic trends in political thought that are commonplace today would make the radical of 100 years ago very much ashamed of his puny efforts. Consider too the manner of dress of the two sexes. During the short span of 50 years, our women have emerged from the flowing skirts to the modern bathing suit like a silkworm bursting from its cocoon. Imagine the boy and girl of today, normally attired, appearing on an ocean beach at the turn of the century! Yet scarcely anyone is disturbed now by this radical change or by many other habits and customs that have evolved.

During the years of negotiations between the members of The Medical Society of Virginia and the Old Dominion Medical Society, it was claimed, and sincerely believed, that Negro physicians were interested only in the scientific parts of our meetings and cared nothing for the social events. This distinction is quite important to the white members and actually should mean little to the small group of Negroes.

When we meet next month, the program will include the usual social affairs. I am perfectly sure that the interests of the Society and of its individual members will best be served by what may be called "segregation". If our new members demand admission to these affairs, unpleasant reactions are inevitable. For the good of us all, let me express the hope that it will not happen. And further, I urge all members to attend this meeting and profit from the excellent program which has been arranged.

Carrington Williams

President

Editorial . . . .

The Doctor Draft

DESPITE stiff opposition, on the part of representatives of the AMA and others, the doctor draft has been extended for two more years—until July 1, 1957, to be exact.

There are two principal changes in the law extending the draft. It no longer applies to physicians over 46 years of age, and it excludes those 35 and over whose applications for commissions in the Armed Forces have, at any time, been rejected for physical reasons. The law states specifically:

> "No person in the medical, dental, and allied specialist categories shall be inducted under the provisions of this subsection: (A) after he has attained the thirty-fifth anniversary of the date of his birth, if he applied or has applied for a commission in one of the Armed Forces in any of such categories and is or has been rejected for such commission on the sole grounds of a physical disqualification, or (B) after he has attained the forty-sixth anniversary of the date of his birth."

While these two changes ease the pressure considerably on many physicians, they have not altered the fact that the younger physicians are still faced with positive military obligations; and such obligations should be recognized as these men plan their medical futures.

The physician completing a first year internship, who has a military obligation to Selective Service due to his age and a further responsibility to the Doctors' Draft, faces perhaps the most difficult problem. Should he begin a residency training program, he should do so with the realization that he has a military obligation and it is entirely possible he will receive orders for induction sometime during the year. The State Advisory Committee to Selective Service has been repeatedly advised by the National Committee such physicians who begin these programs cannot, except in very rare instances, be considered essential.

Should the physician completing his first year internship apply for a commission and be accepted, there is no way to determine when he will be called to active duty. It would probably be wise for such physician to request immediate orders to active duty to eliminate the period of uncertainty as to when he will be called into service.

Hospitals must also make important decisions. If a young man possessing a military obligation is appointed to a residency, it must be done with the full knowledge that he might be called any time during the year. It would, under such conditions, be most difficult to establish essentiality.

In most instances medical graduates are permitted to complete their first year internships before being called. It might be well to mention that all graduates, not members of an Armed Forces reserve component, are required to register under the special draft on the day the degree is awarded or within five days thereafter. A physician must register under the doctor draft even though he has previously registered for the regular draft.

J.M.E.

THE FOUR PRIORITIES UNDER THE DOCTOR DRAFT

Priority I —Physicians who received all or part of their professional education at government expense or received educational deferments in World War II, and who served less than 90 days on active duty.

Priority II —Physicians similarly educated or deferred, but who served between 90 days and 17 months on active duty.

Priority III—Physicians who did not receive government assistance toward their professional education or were not deferred for educational purposes and who have no military service.

Priority IV—Physicians with military service subsequent to September 16, 1940. Also includes those physicians who received all or part of their professional education at government expense or received educational deferments in World War II, but who served on active duty more than 17 months.

News . . . .

Calendar of Coming Events

Academy of Psychosomatic Medicine—Plaza Hotel, New York, N. Y., October 6-8.
The Medical Society of Virginia—Hotel Jefferson, Richmond, October 16-19.
Southern Medical Association—Houston, Texas, November 14-17.
American Association of Blood Banks—Palmer House, Chicago, Illinois, November 19-21.
National Society for Crippled Children and Adults—Palmer House, Chicago, Illinois, November 19-21
Virginia Society of Ophthalmology and Otolaryngology—Medical College of Virginia, Richmond, November 29-December 2.

The Annual Banquet.

Something different in the way of entertainment is in store for those attending the annual banquet of The Medical Society of Virginia on Tuesday, October 18.

Drama—the heavy type—will be the order of the evening. The cast?—Virginia physicians of course! —aided and abetted by some of Richmond's finest talent. Two skits entitled "As Doctors See Patients" and "As Patients See Doctors" will highlight the program.

Dancing shoes will be in vogue when the music begins at 9:00 P.M. The Local Committee on Arrangements promises a real surprise, but rumor has it that negotiations with a popular band of the day are under way.

It all adds up to a gala evening which no one will wish to miss.

The Southwestern Virginia Medical Society

Will hold its next meeting at the General Shelby Hotel, Bristol, on Thursday, September 15th.

New Brigadier General at Walter Reed.

The Commandant of Army Medical Service Graduate School at Walter Reed has been made a brigadier general. He is John R. Wood, who received his doctor of medicine degree from the Medical College of Virginia in 1928 and was awarded the honorary degree of Doctor of Science in 1948. General Wood is a native of Richmond, Virginia.

Dr. Walter J. Otis,

New Orleans, La., has been certified as a Mental Hospital Administrator by the Committee on Certification of Mental Hospital Administrators of the American Psychiatric Association. He is a graduate of the Medical College of Virginia, class of 1915, and is neuropsychiatrist in chief at the DePaul Hospital.

Cancer Society Moves.

The Virginia Division, American Cancer Society, has moved its headquarters from Charlottesville to 303 West Franklin Street, Richmond.

News from the State Health Department.

Health services were established in Patrick County for the first time when it became a part of the Henry-Martinsville-Patrick Health District under the direction of Dr. Stanley P. Mayers, Jr., effective August 1, 1955. Dr. Mayers has assumed the position of Director of this district after completing a year's approved Residency in Public Health.

Effective July 1, Clarke County, previously without a local health department, became a part of the Frederick-Winchester-Clarke Health District under the direction of Dr. A. L. Lindall.

After completion of the usual three months' orientation training with the State Department of Health, the following Health Director appointments have been announced:

Dr. R. W. Moseley assumed the position of Director of the Carroll-Grayson Health District, effective July 1, 1955.

Dr. William P. Wagner became Director of the Dinwiddie-Prince George-Surry-Sussex Health District, effective June 15, 1955.

Dr. Thomas Christie took over his duties as assistant director of the Bedford-Franklin-Roanoke-Health District, effective July 1, 1955.

With the completion of assignments of the above, all counties in Virginia are now covered by local health departments with the exception of Craig, Floyd, Gloucester, and Mathews.

Dr. J. T. Showalter,

Christiansburg, has been named to his second year as chairman of the blood program committee of the Roanoke Regional Red Cross Blood Center. This is a 36-chapter region in Virginia and West Virginia.

T. Duckett Jones Memorial Fund

The death last year of Dr. T. Duckett Jones brought to an untimely end his dedicated career in medical research. A group of his friends have initiated the T. Duckett Jones Memorial Fund in the belief that the finest acknowledgement of his work would be the establishment of a Fund devoted to advancing the research objectives to which he gave so much of himself.

At present the Committee is of the opinion that research in Rheumatic Fever, which was the subject of much of Dr. Jones' own research activity, would be given priority by the Fund's administrators, but not an exclusive claim on its income. Depending on the amount received there are a number of awards which might be made to represent the philosophy and professional interests of Dr. Jones. Among the several already suggested are Fellowships for promising young investigators, short-term support for investigators holding permanent positions to permit completion of studies or projects, or Endowment for a T. Duckett Jones Professorship in an appropriate field in a university. Further suggestions are welcomed by the Committee. Contributions are tax exempt and should be sent to the T. Duckett Jones Memorial Fund, 525 East 68th Street, New York 21, N. Y.

Dr. William R. Nelson,

Recently of the University of Virginia, Charlottesville, is now located in Denver, Colorado, where he is connected with the University of Colorado Medical School and will also begin a practice in general and tumor surgery.

Dr. R. Finley Gayle, III,

Is now associated with Dr. R. Finley Gayle, Jr., Dr. Merritt W. Foster, Jr., and Dr. Claude L. Neale, in the practice of psychiatry and neurology. Their offices are in the Professional Building, Richmond.

Dr. W. Linwood Ball, Jr.,

Richmond, announces the association of Dr. O. T. Graham, Jr., for the general practice of medicine.

American College of Chest Physicians.

At the annual convocation, held in Atlantic City, June 4th, the following physicians from Virginia received their Fellowship certificates: Drs. William E. Apperson, Richmond; Lewis H. Bosher, Jr., Richmond; Thomas N. Hunnicutt, Jr., Newport News; Samuel McDaniel, Norfolk; and Edward S. Ray, Richmond.

Fellowships for Basic Research in Arthritis.

The Arthritis and Rheumatism Foundation is offering the following research fellowships in the basic sciences related to arthritis: Predoctoral fellowships ranging from $1,500 to $3,000 per annum, tenable for 1 year with prospect of renewal; Postdoctoral fellowships ranging from $4,000 to $6,000 per annum, tenable for 1 year with prospect of renewal; and Senior fellowships for more experienced investigators will carry an award of $6,000 to $7,000 per annum and are tenable for 5 years. The deadline for applications is October 15, 1955. For information and application forms, address the Medical Director of the Foundation, 23 West 45th Street, New York 36, N. Y.

Van Meter Prize Award.

The American Goiter Association again offers the Van Meter Prize Award of $300.00 and two honorable mentions for the best essays concerning original work on problems related to the thyroid gland. The competing essays may cover either clinical or research investigations, should not exceed 3,000 words in length and must be presented in English. Duplicate typewritten copies, double spaced should be sent to the Secretary, Dr. John C. McClintock, 149½ Wash-

ington Avenue, Albany, New York, not later than January 1, 1956.

All Caffeine Cannot Be Removed.

Despite advertising claims of complete caffeine removal, decaffeinated coffee still has some caffeine in it, according to recent tests conducted by the chemical laboratory of the American Medical Association.

"As yet it has not been possible to extract all the caffeine in commercially prepared coffee," a report in the July 23rd Journal of the American Medical Association said. The report was prepared by Robert G. Martinek, Pharm.D., and Walter Wolman, Ph.D., director of the laboratory.

Caffeine content in a cup of regular decaffeinated coffee is about one third of the amount in a cup of regular ground coffee. A cup of instant decaffeinated coffee has from one fourth to one eighth as much caffeine as a cup of regular ground coffee.

The report warned: "Advertising that makes claims implying the almost total removal of caffeine in decaffeinated coffees must be viewed with skepticism."

A cup of regular ground coffee has almost twice as much caffeine as does a cup of regular instant coffee.

The potential caffeine content of a cup of black tea is comparable to that of a cup of regular ground coffee, but if the tea is prepared according to directions, a cup contains only 65 per cent of the potential amount. Green tea has about three-fourths as much caffeine as black tea.

For Rent.

Doctor's office. Three doors west of the Lee Medical Building, Richmond. Will remodel to suit doctor. Write "Office", care the Virginia Medical Monthly P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Wanted.

General surgeon for part-time work in clinic group located near Richmond; also a physician to do general practice and, if desired, learn and do some general surgery and EENT. Reply stating pertinent information to #45, % Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Position Wanted.

Veteran, aged 23, married, will be working for x-ray technician's registry, starting last of October or first of November 1955. Has had training at University of Virginia Hospital. For references, contact Dr. Vincent Archer or Miss Elizabeth Nolley, X-Ray Department, University of Virginia, Charlottesville. Write "Veteran", care the Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

For Sale.

Surburban properties, homes and timberlands, located in the vicinity of Richmond and Hopewell. Sound investment opportunities. Call or write: W. L. Broaddus, phone 844, P. O. Box 479, Hopewell, Va. (*Adv.*)

Obituaries . . . .

Dr. Frank McConnell Leech,

Lexington, died August 9th following a heart attack. He was sixty years of age and a graduate of the Medical College of Virginia, class of 1920. Dr. Leech had practiced surgery in Lexington for thirty-two years. He served in the Navy during World War II. Dr. Leech was a fellow of the American College of Surgery and belonged to Omega Upsilon Phi medical fraternity, New York Southern Society and the Virginia Society of New York. He had been a member of The Medical Society of Virginia since 1924. His mother, four sisters and a brother survive him.

Dr. Earley Thomas Terrell, Jr.,

Assistant chief of neuropsychiatric service at McGuire Veterans Administration Hospital, Richmond, died July 17th. He was forty-eight years of age and a graduate of the Medical College of Virginia in 1929. Dr. Terrell was on the staff of Eastern State Hospital from 1929 to 1943. He was then on duty with the United States Navy, with the rank of commander, and became associated with the VA Hospital in 1946. Dr. Terrell had been a member of The Medical Society of Virginia for twenty years. His wife and three daughters survive him.

METAMUCIL® IN BOWEL MANAGEMENT

"Smoothage-Bulk" Restores Normal Peristalsis

The gentle distention of the bowel wall provided by Metamucil® is physiologically corrective in constipation management.

Normal peristaltic movements of the bowel depend on the consistency and quantity of the material within the lumen. In constipation, hypohydration accounts for the hard consistency and inadequate quantity of the fecal mass. With Metamucil, stool quality becomes soft and plastic, while stool quantity is increased to produce gentle distention, the natural stimulus to peristalsis.

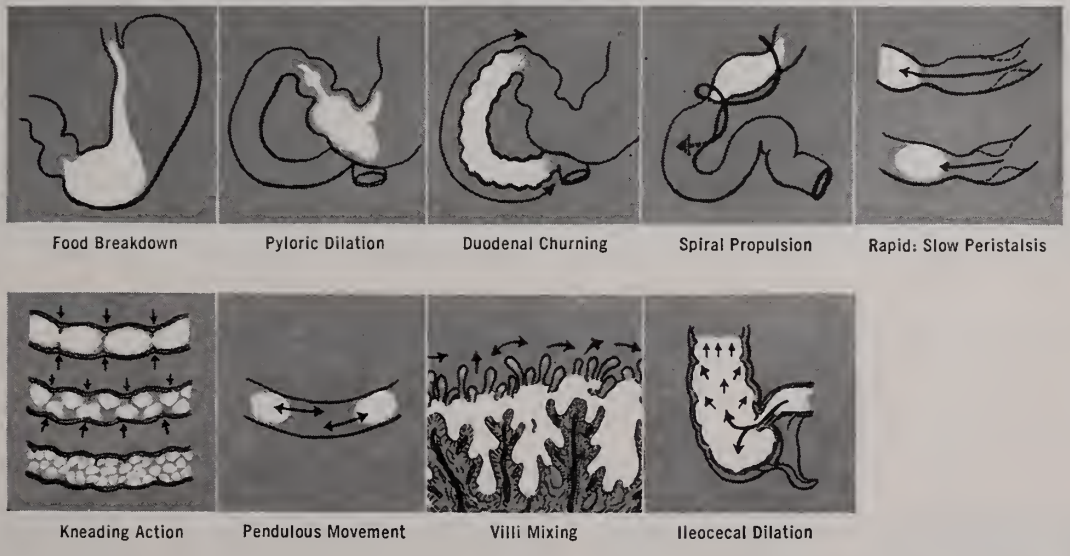
Metamucil is the highly refined mucilloid of the Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

The usual adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice one to three times daily. An additional glass of liquid may be taken if indicated.

Metamucil is supplied in containers of 1, ½ and ¼ pound.

G. D. Searle & Co., Research in the Service of Medicine.

TYPES OF MOVEMENT WITHIN THE BOWEL



SEARLE

A Modern Hospital for the Treatment of Alcoholism Exclusively

- A private hospital offering scientific, institutional, medical, psychological, reflex, reduction and other methods for the rehabilitation of consent patients suffering from alcoholism.

- All equipment modern with facilities to take care of 50 patients both male and female.

- Under the direction of a competent licensed M. D. with five consultant physicians subject to call. Registered Nurses in charge 24 hours daily.



Approved and licensed by the Virginia State Hospital Board. Atop beautiful Mt. Regis, five miles West of Roanoke, on Highway 11, in the quiet serene mountains of Virginia, conducive to rest, comfort and recuperation. Doctors inspection invited. For information phone or write.

WHITE CROSS HOSPITAL

Five Miles West of Roanoke on Route No. 11.
Salem, Virginia — Phone Salem 287

WHITE CROSS HOSPITAL

Copyright 1948. H. N. Alford, Atlanta, Ga.

Medical College of Virginia

HOSPITAL DIVISION

RICHMOND, VIRGINIA

A health center using the latest methods of diagnosis and treatment of disease.

MEDICAL COLLEGE OF VIRGINIA HOSPITAL
OUT-PATIENT DEPARTMENT
SAINT PHILIP HOSPITAL
DOOLEY HOSPITAL

The patient's welfare is our primary interest.

C. P. CARDWELL, JR., *Director*

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

THE KEELEY INSTITUTE
447 W. Washington St.
GREENSBORO,
NORTH CAROLINA

Out-Patient Clinic
And Hospital For Rehabilitation Of The ALCOHOLIC

A. F. Fortune, MD: Medical Director
Ben F. Fortune, MD: Associate Medical Director
R. H. Dovenmuehle, MD: Consultant in Psychiatry

In-patients are accepted in state of acute alcoholism. No waiting period required.

Registered by American Medical Association

The State Board of Medical Examiners of Virginia

The next meeting of the Board will be held at Richmond Hotel, Richmond, Virginia December 6, 1955 and the examinations will be held at the same hotel December 7, 8 and 9. November 21, 1955 is the deadline for receipt of applications for the examination and documents and papers to be discussed and acted upon by the Board. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

The . . . Thompson Homestead School

FOR EXCEPTIONAL CHILDREN

Year round private home and school for infants, children and adults on pleasant 250 acre farm near Charlottesville.

Write for booklet.

MRS. J. BASCOM THOMPSON, *Principal*

FREE UNION **VIRGINIA**



Part View of Park Grounds

TERRACE HILL was specifically built for a Nursing Home. Superb 24 hours daily care. Under supervision of a Registered Nurse and Resident Externe. Quiet atmosphere. Trained Dietitian. Accommodates 50 guests Private and semi-private rooms with lavatories Rates $45.00 to $75.00 weekly for room, board and general nursing care. Your inspection invited.

Professional Nursing Care

TERRACE HILL

Nursing Home, Inc.

"Understanding Care"

2112 MONTEIRO AVE., RICHMOND, VA.



Comfortable Lounges

Around the Clock

NURSING CARE

•

Convalescents
Chronic Cases
Elderly People



Wide, Long Hallways

Each Guest Under Care of Own Doctor.

Professional care supervised by trained nurse. Doctors orders carefully followed. No parking problem. Regularly inspected by City Health Department. For additional information

Write or Call Superintendent

TERRACE HILL NURSING HOME, Dial 3-3993

McGUIRE CLINIC

ST. LUKE'S HOSPITAL

RICHMOND, VIRGINIA



General Medicine
HUNTER H. McGUIRE, M.D.
MARGARET NOLTING, M.D.
JOHN P. LYNCH, M.D.
WM. H. HARRIS, JR., M.D.
JOHN B. CATLETT, M.D.
ROBERT W. BEDINGER, M.D.

Orthopedic Surgery
JAMES T. TUCKER, M.D.
BEVERLEY B. CLARY, M.D.
EARNEST B. CARPENTER, M.D.
JAMES B. DALTON, JR., M.D.

Ophthalmology, Otolaryngology
FRANCIS H. LEE, M.D.

General Surgery
WEBSTER P. BARNES, M.D.
JOHN H. REED, JR., M.D.
JOHN ROBERT MASSIE, JR., M.D.
JOSEPH W. COXE III, M.D.

Dental Surgery
JOHN BELL WILLIAMS, D.D.S.

Urology
AUSTIN I. DODSON, M.D.
CHAS. M. NELSON, M.D.
AUSTIN I. DODSON, JR., M.D.

Pediatrics
HUBERT T. DOUGAN, M.D.

Obstetrics
W. HUGHES EVANS, M.D.
W. H. COX, M.D.
JAMES M. WHITFIELD, M.D.

Bronchoscopy
GEORGE AUSTIN WELCHONS, M.D.

Roentgenology
JESSE N. CLORE, JR., M.D.
STUART J. EISENBERG, M.D.

Pathology
J. H. SCHERER, M.D.

Treasurer: RICHARD J. JONES, BS., C.P.A.

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 'Hydeltra'

DELTRA® tablets

(Prednisone, Merck)

2.5 mg. - 5 mg. (scored)

the delta$_1$ analogue of cortisone

SHARP & DOHME

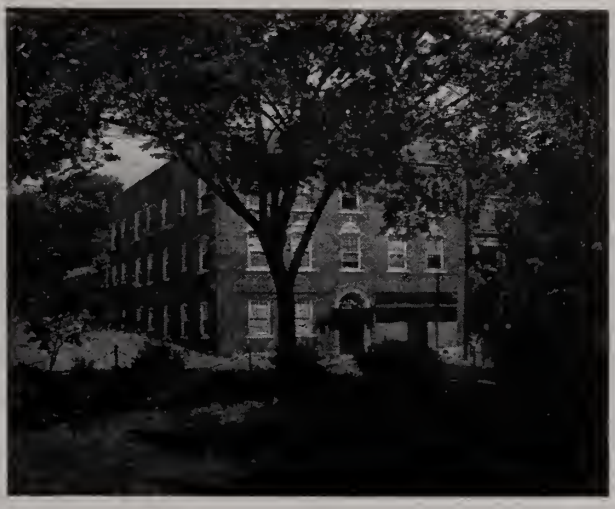
Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

Indications:

Rheumatoid arthritis
Bronchial asthma
Inflammatory skin conditions

Gill Memorial Eye, Ear and Throat Hospital, Inc.

Roanoke, Virginia



STAFF

ELBYRNE G. GILL, M. D.
HOUSTON L. BELL, M. D.
THOMAS QUILTY, M. D.
DORIS L. JANES, B. S., O. D.
(Orthoptics and Contact Glasses)
S. H. HOLLAND, M. D.
ROBERT B. JONES, JR., M. D.

A Modern, Fireproof Hospital, Specially Designed and Equipped for the Medical and Surgical Care of Ophthalmology, Otolaryngology, Facio-Maxillary Surgery, Bronchoscopy and Esophagoscopy.

Complete Laboratory and X-Ray Equipment.

Physicians and Graduate Nurses in Constant Attendance.

The Hospital offers a residentship of three years to a graduate of an approved medical school, who has had an internship of at least one year in an approved hospital.

For further information, address

BUSINESS MANAGER, BOX 1789, ROANOKE, VIRGINIA

RIVERSIDE HOSPITAL, Newport News, Va.



A General Hospital (265 beds) with Departments in Medicine, Surgery, Obstetrics, Pathology, Radiology, Pediatrics and Nursing. The Hospital is accredited by the Council on Medical Education of the American Medical Association for training first year interns, residencies in the surgical specialties for one and two years, general practices two years full approval, internal medicine, and obstetrics and gynecology, and the School of Nursing is accredited by the Virginia State Board of Nurse Examiners.

DAVID E. WATSON,
Administrator

MISS ROSE M. DEWEVER, R.N.,
Director, School of Nursing

RICHMOND EYE HOSPITAL
RICHMOND EAR, NOSE AND THROAT HOSPITAL
(COMBINED)
RICHMOND, VIRGINIA



A new non-profit Community Hospital specially constructed for the treatment of Eye, Ear, Nose and Throat Diseases, including Laryngeal Surgery, Bronchoscopy and Plastic Surgery of the Nose.

Professional care offered a limited number of charity patients.

ADDRESS: **JULIA WAGNER WATERS, R.N., *Administrator*** **408 North 12th Street**

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets

(PREDNISOLONE, MERCK)

2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

RIVERSIDE CONVALESCENT HOME

Sophia & Fauquier Sts. Fredericksburg, Virginia



For convalescent, aged, chronically ill, and retired persons.

Centrally located in Historic Fredericksburg, on the beautiful Rappahannock, in the former Mary Washington Hospital Building. Completely redecorated and refurnished.

Eighty Bed Capacity
Medical Supervision
Inspection Invited

Rates:
$30.00 to $75.00 per week

STUART CIRCLE HOSPITAL

413-21 Stuart Circle
RICHMOND, VIRGINIA

Medicine:
Manfred Call, III, M.D.
M. Morris Pinckney, M.D.
Alexander G. Brown, III, M.D.
John D. Call, M.D.
Wyndham B. Blanton, Jr., M.D.

Obstetrics and Gynecology:
Wm. Durwood Suggs, M.D.
Spotswood Robins, M.D.
Edwin B. Parkinson, M.D.

Orthopedics:
Beverley B. Clary, M.D.

Pediatrics:
Charles P. Mangum, M.D.
Edward G. Davis, Jr., M.D.

Ophthalmology, Otolaryngology:
W. L. Mason, M.D.

Anesthesiology
William B. Moncure, M.D.
Heth Owen, Jr., M.D.

Surgery:
A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr., M.D.

Urological Surgery:
Frank Pole, M.D.

Oral Surgery:
Guy R. Harrison, D.D.S.

Plastic Surgery:
Hunter S. Jackson, M.D.

Roentgenology and Radiology:
Fred M. Hodges, M.D.
L. O. Snead, M.D.
Hunter B. Frischkorn, Jr., M.D.
William C. Barr, M.D.

Physiotherapy:
Miss Etheleen Dalton

Director:
Charles C. Hough

ST. ELIZABETH'S HOSPITAL

RICHMOND 20, VIRGINIA

STAFF

Guy W. Horsley, M.D.	General Surgery and Gynecology
D. Coleman Booker, M.D.	General Surgery and Gynecology
Austin I. Dodson, M.D.	Urology
Austin I. Dodson, Jr., M.D.	Urology
J. Edward Hill, M.D.	Urology
Douglas G. Chapman, M.D.	Internal Medicine
Eimer S. Robertson, M.D.	Internal Medicine
T. E. Stanley, M.D.	Internal Medicine
Fred M. Hodges, M.D.	Roentgenology
L. O. Snead, M.D.	Roentgenology
Hunter B. Frischkorn, Jr., M.D.	Roentgenology
Helen Lorraine	Medical Illustration

ADMINISTRATION

William Scott	Business Manager

SCHOOL OF NURSING

The School of Nursing is affiliated with The Johns Hopkins Hospital School of Nursing for a three months' course each in Pediatrics and Obstetrics, and with the Tucker's Hospital in Richmond for a 12 weeks course in Psychiatry.

Address: Superintendent of Nurses

Third Decade of Nursing

MODERN IN EQUIPMENT *OLD IN TRADITION*

MRS. PLYLER'S NURSING HOME

KATE E. PLYLER (1876-1947) MARY INGRAM CLARK

CONVALESCENT — CHRONIC — AGED

- Equipped for oxygen and transfusions
- 30 special & general nurses
- 24-hour nursing care
- Centrally located
- 50-bed capacity
- Dietician
- Rates from $42.00 to $70.00 per week for room, board and general nursing care.





For further information write or call MRS. GENE CLARK REGIRER, Supt.

1613-15-17 Grove Avenue—Richmond, Virginia—Telephone 84-3221

1950 Cortone® | 1952 Hydrocortone®

1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets

(PREDNISOLONE, MERCK) 2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

Indications: *Rheumatoid arthritis*

Bronchial asthma

Inflammatory skin conditions

SHARP & DOHME

Philadelphia 1, Pa.

Division of Merck & Co., Inc.

TUCKER HOSPITAL Inc.

212 West Franklin Street,

Richmond. Virginia

A private hospital accepting for diagnosis and treatment organic neurological conditions, selected psychiatric and alcoholic cases, metabolic disturbances of an endocrine nature, individuals who are having difficulty with their personality adjustments, and children with behavior problems. Patients with general medical disorders admitted for treatment under our staff of visiting physicians.

Under the Professional Charge of

DR. HOWARD R. MASTERS, DR. JAMES ASA SHIELD

AND ASSOCIATES

Appalachian Hall • ESTABLISHED 1916 Asheville, North Carolina



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

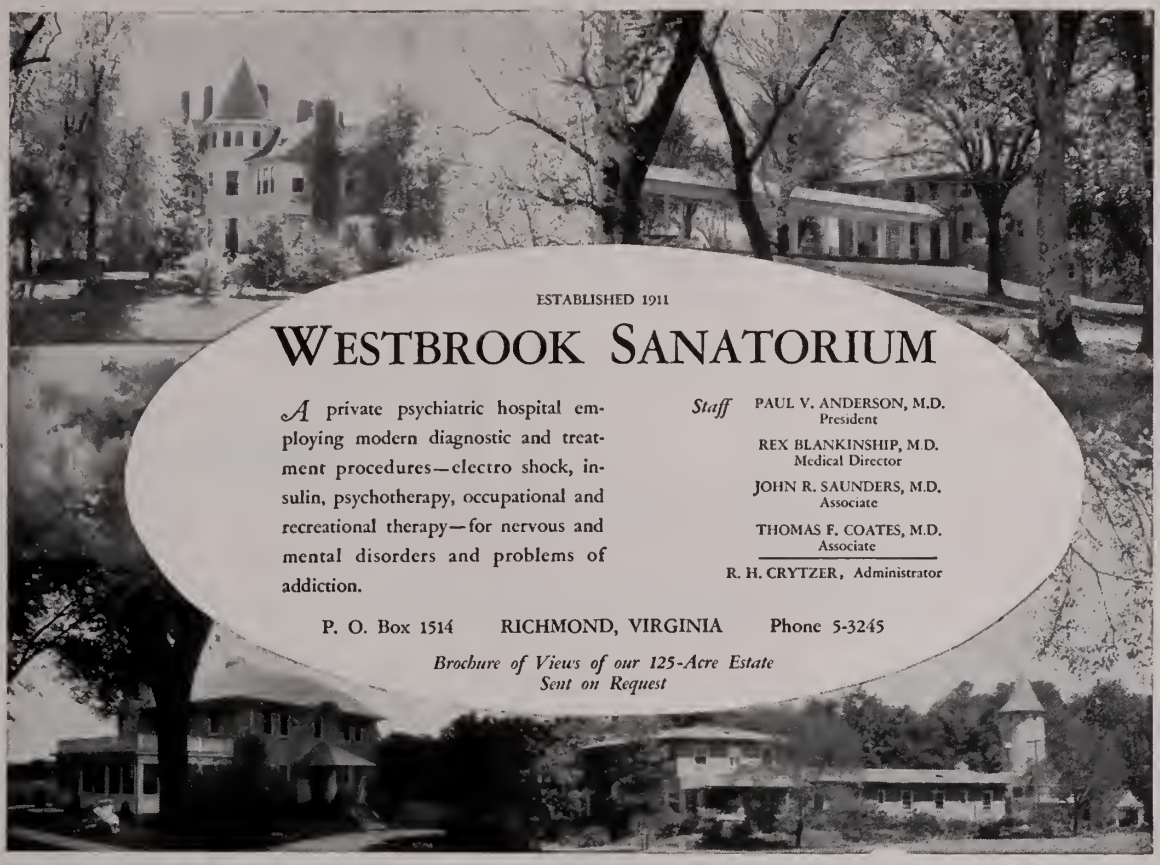
Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, SR., M.D.
Diplomate in Psychiatry
WM. RAY GRIFFIN, JR., M.D.

MARK A. GRIFFIN, SR., M.D.
Diplomate in Psychiatry
MARK A. GRIFFIN, JR., M.D.

For rates and further information write APPALACHIAN HALL, ASHEVILLE, N. C.



ESTABLISHED 1911

WESTBROOK SANATORIUM

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

Staff
PAUL V. ANDERSON, M.D.
President
REX BLANKINSHIP, M.D.
Medical Director
JOHN R. SAUNDERS, M.D.
Associate
THOMAS F. COATES, M.D.
Associate
R. H. CRYTZER, Administrator

P. O. Box 1514 RICHMOND, VIRGINIA Phone 5-3245

Brochure of Views of our 125-Acre Estate Sent on Request

SAINT ALBANS

A PRIVATE PSYCHIATRIC HOSPITAL
RADFORD, VIRGINIA



STAFF

James P. King, M. D., Director
James K. Morrow, M. D. Thomas E. Painter, M. D. Daniel D. Chiles, M. D.
James L. Chitwood, M. D., Medical Consultant

Affiliated Clinic Offering Psychiatric and Psychological Evaluation and Therapy:

BLUEFIELD MENTAL HEALTH CENTER
1400 Bland Street **Bluefield, W. Va.**
David M. Wayne, M. D., Director

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets

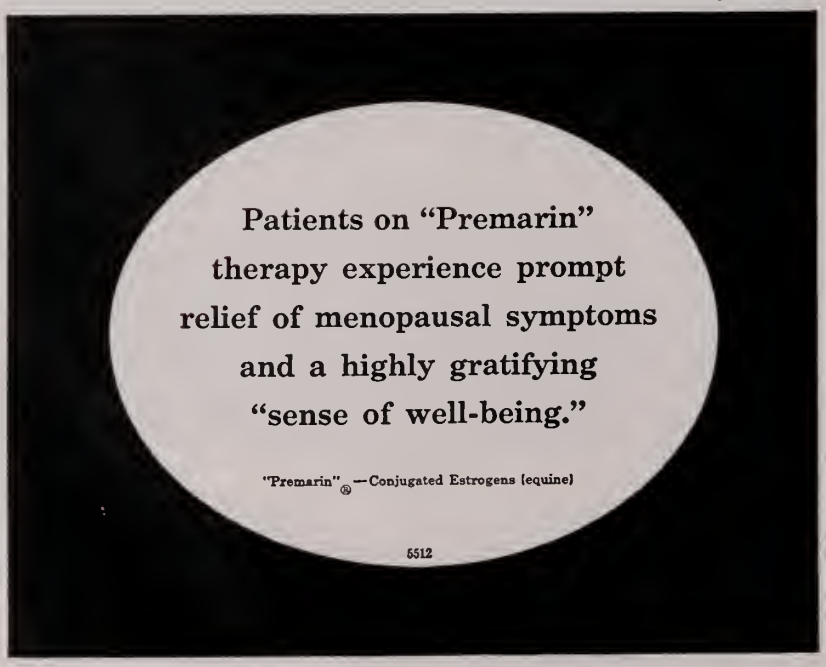
(PREDNISOLONE, MERCK) 2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

SHARP & DOHME

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.



The Low Calorie Diet goes to work!

For your patient who works and eats out, a diet that calls for lamb chops when lamb chops aren't on the menu is an invitation to "slip off." But a diet outline that allows for substitution leaves no excuse. And learning to fill in the details of the outline gives your patient incentive to stick to his diet.

Here's what he should learn—

That a chocolate bar doesn't equal a hamburger—except in calories. An alternative must be equivalent nutritionally as well as calorically.

That fresh fruits and vegetables such as celery and radishes make satisfying between-meal nibbles without adding too many calories.

That spices and herbs, lemon and vinegar, dill pickles and india relish add zest and variety with few or no calories.

Here's what he should do—

Keep a daily record of his calorie count—between-meal snacks included!

At cocktail parties, reach for a radish rose or carrot stick instead of a high-calorie canapé. And choose the drink that lasts a long time.

Keep his diet out of the conversation. Sympathy from friends begets sympathy for himself. And self-pity is death to a diet.

The patient who works out the details of his diet within your outline earns a bonus beyond losing weight. He learns the good diet habits that lead to a well-balanced maintenance diet later. And the pounds he takes off, stay off.



United States Brewers Foundation

Beer—America's Beverage of Moderation

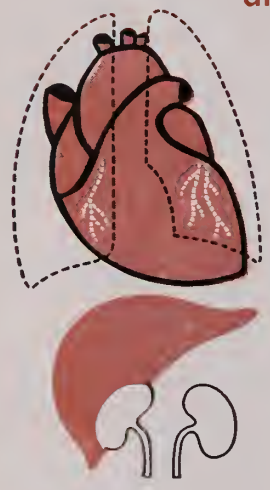
104 Calories/8 oz. glass*

If you'd like reprints of 12 different diets, please write United States Brewers Foundation, 535 Fifth Avenue, New York 17, N. Y.

*Average of American beers

does your diuretic cause acidosis?

know your diuretic



diuresis without depletion of alkaline reserve—avoiding dangers of acid-base imbalance—is characteristic of the organomercurials. In contrast, the diuretic activity of carbonic anhydrase inhibitors, acidifying salts, and the resins depends on production of acidosis.

TABLET

NEOHYDRIN®

BRAND OF CHLORMERODRIN

(18.3 MG. OF 3-CHLOROMERCURI-2-METHOXY-PROPYLUREA IN EACH TABLET)

- action not dependent on production of acidosis
- no "rest" periods... no refractoriness

a standard for initial control of severe failure

MERCUHYDRIN® SODIUM

BRAND OF MERALLURIDE INJECTION

Leadership in diuretic research

Lakeside LABORATORIES, INC., MILWAUKEE 1, WISCONSIN

88755



DOCTOR, here's a question and an answer you may find useful when patients ask about cigarettes:

What do Viceroys do for you that no other filter tip can do?



These filter traps, doctor, are composed of a pure white non-mineral cellulose acetate. They provide maximum filtering efficiency without affecting the flow of the smoke.

And, in addition, they enhance the flavor of Viceroy's quality tobaccos to such a degree that smokers report they taste even better than cigarettes without filters.

King-Size Filter Tip VICEROY

WORLD'S MOST POPULAR FILTER TIP CIGARETTE

ONLY A PENNY OR TWO MORE THAN CIGARETTES WITHOUT FILTERS



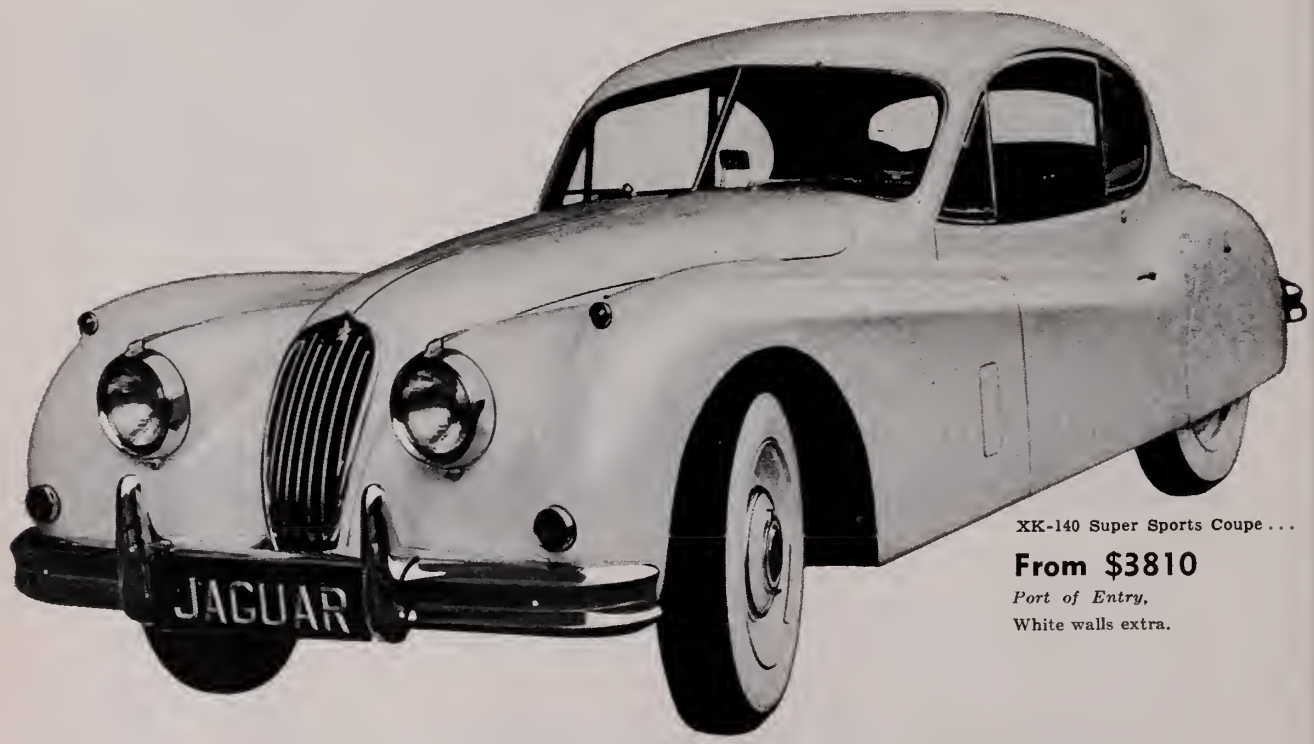
The very attributes that make Jaguar the world's foremost sports car make it particularly suitable to *your* exacting profession.

The speed that brought Jaguar home a winner in over 46 major races . . . for your emergency calls. Maneuverability . . . that weaves you through the worst traffic. Oversize racing brakes . . . for quick stops and safety under all conditions. Dependability . . . so necessary in your active practice.

For instance, a Jaguar hard top coupe was driven 7 continuous days and nights . . . 16,851 non-stop miles . . . at an average speed of over 100 m.p.h. Yet after this grueling test, technicians found it would have passed new car inspection!

just what the doctor ordered!

The new Jaguar coupe . . . with its quiet good looks, world renowned XK-140 engine and very much enlarged space behind the front seat . . . is truly Rx for *you!* Arrange for a demonstration today!



XK-140 Super Sports Coupe . . .

From $3810

Port of Entry,
White walls extra.

JAGUAR

the finest car of its class in the world

HARPER MOTORS, INC.
901 Preston Avenue
CHARLOTTESVILLE, Va.
Tel. 28191

FOREIGN CAR DIST. INC.
806 Granby Street
NORFOLK, Va.
Tel. 40663

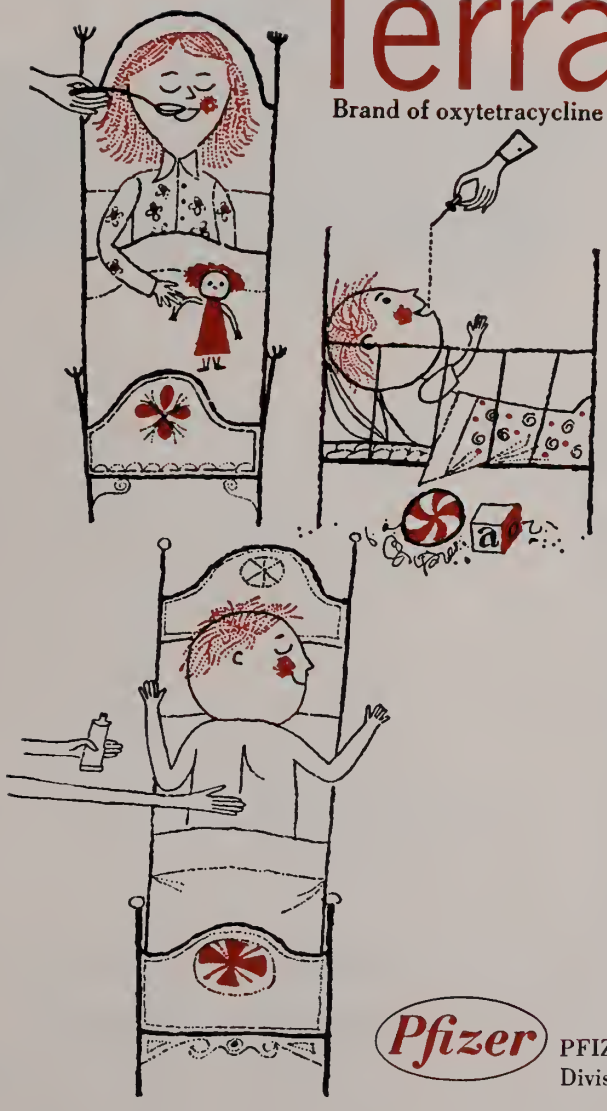
IMPERIAL MOTORS OF FAIRFAX
Route 29
Nr. FALLS CHURCH, Va.
Tel. Jefferson 43302

IMPERIAL CAR DISTRIBUTORS, INC. Academy and Washington, HAMPTON, Va. Tel. 4383

continuing
confirmation
of a
"versatile and
life-saving"
agent*
in pediatric
practice

Terramycin®

Brand of oxytetracycline



for therapy and prophylaxis of infection—in premature and newborn babies—in infants and older children
as ". . . a valuable adjunct to competent management of the infections of childhood."*
Available in a wide variety of special dosage forms:

Oral (Pediatric Drops; Oral Suspension)
Intravenous
Intramuscular
Aerosol
Soluble Tablets (for administration through an indwelling tube in premature infants)
Ointment (topical)
Ophthalmic Ointment and Solution

*Farley, W. J.: Oxytetracycline in Pediatrics, Internat. Rec. Med. *168*:140 (March) 1955.

Pfizer

PFIZER LABORATORIES, Brooklyn 6, N. Y.
Division, Chas. Pfizer & Co., Inc.

One of a Series of Newspaper Ads Directed to Your Patients and Our Customers....

PEOPLES DRUG STORES INC

THANKS TO MODERN MEDICINE

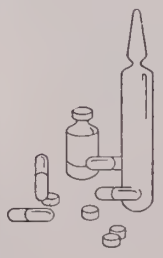
few dollars spent— many dollars saved



Before his recent illness, he complained that medicine *seemed* to cost so much:

He knows the truth now. The medicine his doctor prescribed *seemed* expensive . . . but it helped him save many times the cost. Instead of spending weeks in the hospital, he was up in a few days. Instead of losing weeks of wages, he was back on the job soon.

Remember—the true value of your prescription lies in what the medicine does—not the price you pay. For full value, bring your next prescription to Peoples, where your doctor's orders will be carried out promptly, accurately, economically. And, of course, your prescription is priced with uniform economy at Peoples Service Drug Store.



PEOPLES *Certified* PRESCRIPTIONS

AT ALL PEOPLES SERVICE DRUG STORES

. . . just what the doctor ordered

© 1955 PEOPLES DRUG STORES, INC.

Upjohn

Ulcer protection that lasts all night:

Pamine*-Phenobarbital
BROMIDE

Tablets

Each FULL-STRENGTH tablet contains:
Phenobarbital ..... 15.0 mg. (¼ gr.)
Methscopolamine bromide ..... 2.5 mg.

Dosage:
One tablet one-half hour before meals, and 1 to 2 tablets at bedtime.

Each HALF-STRENGTH tablet contains:
Phenobarbital ..... 8.0 mg. (⅛ gr.)
Methscopolamine bromide ..... 1.25 mg.

Dosage:
While the dosage and indications are the same as for the full-strength tablets, this tablet allows greater flexibility in regulating the individual dose, and may be employed in less severe gastrointestinal conditions.

Supplied:
Both strengths in bottles of 100 tablets; the full-strength tablets also available in bottles of 500.

Elixir

Each 5 cc. (approx. 1 tsp.) contains:
Phenobarbital ..... 8.0 mg. (⅛ gr.)
Methscopolamine bromide ..... 1.25 mg.
Alcohol 20%

Dosage:
1 to 2 teaspoonfuls three or four times daily, depending upon requirements in the individual patients.

Supplied: Pint bottles

*TRADEMARK, REG. U. S. PAT. OFF.—THE UPJOHN BRAND OF METHSCOPOLAMINE

The Upjohn Company, Kalamazoo, Michigan

for first consideration in hypertension

RAUDIXIN

Squibb Whole Root Rauwolfia

- Raudixin produces a gradual, sustained hypotensive effect which is usually sufficient in mild to moderate cases.
- Raudixin has a mild bradycrotic effect, helping to ease the work load of the heart.
- The tranquilizing effect of Raudixin is often of great benefit to the hypertensive patient.
- Tolerance to Raudixin has not been reported.
- In severe cases, Raudixin may be combined with more powerful drugs. It often enhances the effect of such drugs, permitting lower dosages.
- Raudixin supplies the *total* activity of the whole rauwolfia root.
- Raudixin is accurately standardized by a series of rigorous assay methods.

DOSAGE: 100 mg. b.i.d. initially; may be adjusted as necessary.

SUPPLY: 50 and 100 mg. tablets, bottles of 100 and 1000.

"RAUDIXIN"® IS A SQUIBB TRADEMARK

SQUIBB

TOPICAL LOTION

'ALFLORONE'

ACETATE

(FLUDROCORTISONE ACETATE, MERCK)

Prompt improvement boosts the patient's morale

MAJOR ADVANTAGES: Economical, highly acceptable cosmetically, and effective in lower concentrations than hydrocortisone.



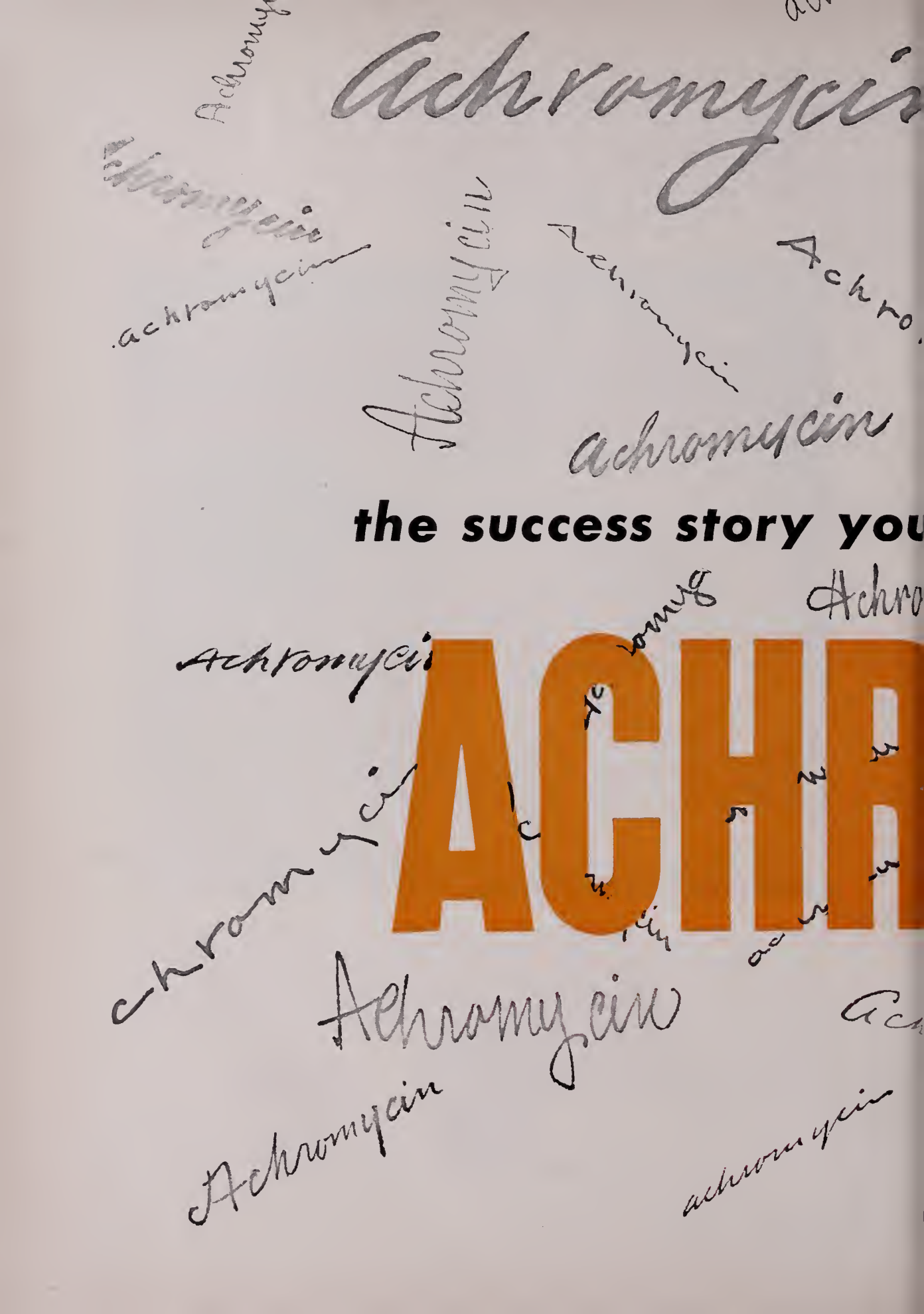
ALFLORONE Lotion appears to be even more effective than the ointment with the added advantage of greater patient acceptability. A recent study[1] confirmed that both product forms produce rapid relief of symptoms and involution of lesions in a significant percentage of cases of atopic dermatitis. Favorable response was also noted in contact dermatitis, anogenital pruritis, severe sunburn and intertrigo. For secondarily infected eczematous lesions, Topical Ointment of HYDRODERM affords combined anti-inflammatory and antibacterial action.

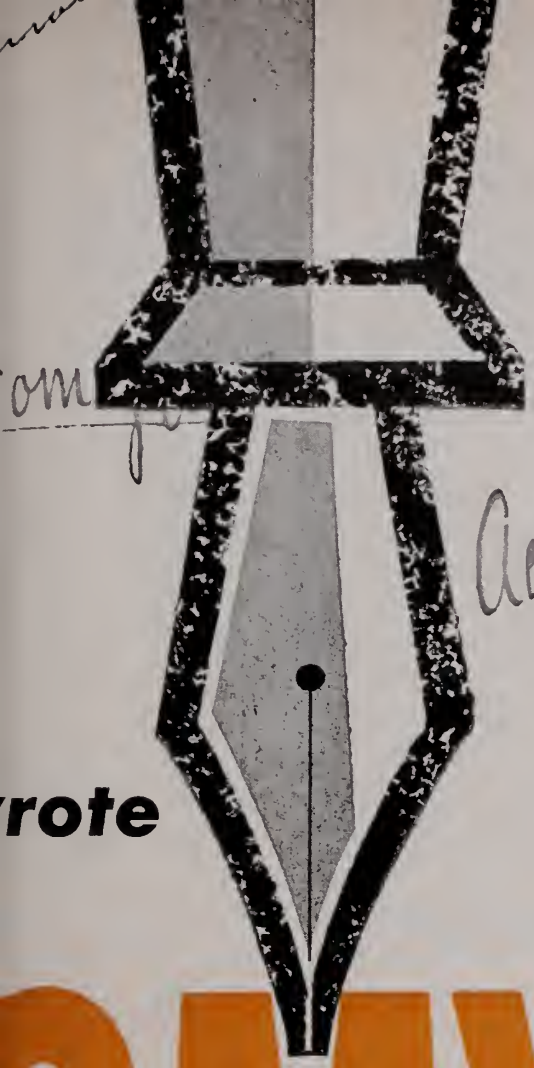
SUPPLIED: Topical Lotion ALFLORONE Acetate: 0.1% and 0.25%, in 15-cc. plastic squeeze bottles. Topical Ointment ALFLORONE Acetate: 0.1% and 0.25%, 5-Gm., 15-Gm. and 30-Gm. tubes. Topical Ointment HYDRODERM: 1% and 2.5% hydrocortisone with 3.5 mg. neomycin base and 1,000 units zinc bacitracin per gram, 5-Gm. tubes.

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

REFERENCE: 1. Robinson, R. C. V., *J.A.M.A.* **157**:1300, April 9, 1955.


Achromycin
achromycin
Achromycin
achromycin
Achromycin
achromycin
the success story you
ACHR
Achromycin
Achromycin
achromycin



rote

OMYCIN*

HYDROCHLORIDE
Tetracycline HCl *Lederle*

dry-filled capsules

When you have prescribed ACHROMYCIN you have confirmed its advantages—again and again. It is well tolerated by patients of every age. Compared with certain other antibiotics, it has a broader spectrum, diffuses more rapidly, is more soluble, and is more stable in solution. It provides prompt control of many infections including those caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa. Furthermore, it is a *quality* product; every gram is made under rigid control in Lederle's *own* laboratory.

ACHROMYCIN, a major therapeutic agent now...growing in stature each day!

RLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* PEARL RIVER, NEW YORK

*REG. U. S. PAT. OFF.

Lederle

Abdominal tenderness

—usually confined to the lower quadrants and at times found only over the cecum—is the most frequently appearing physical manifestation of amebiasis.[1]

KOHN[2] gives a simple, quick method for identifying Endamoeba histolytica in the feces. A small amount of feces is first dispersed in saline solution. If the feces are formed and amebic cysts are likely to be present, solution 1 is used (1 cc. liquefied phenol, 0.6 cc. glacial acetic acid and 50 cc. distilled water). When feces are fluid and vegetative forms are suspected, solution 2 is substituted (0.9 cc. liquefied phenol and 50 cc. distilled water). Two or three drops of the proper reagent are placed on the slide and a loopful of the feces-saline dispersion is added; a cover-glass is applied. The solutions afford a rapid means of differentiation by changing the refractive index of the cells. When the reagent for identifying cysts is used, chromatoid bodies in the cells stand out clearly as rods, bars or short spindle-shaped bodies. Solution 2 outlines details of the nuclear structure, vacuoles and ingested material in the trophozoites.

● *For nondysenteric colonic amebiasis*—**MILIBIS®**

1 tablet 3 times a day for from 7 to 10 days is most commonly used and "has an efficiency of nearly 80 per cent."[3]

● *For hepatic amebiasis*—**ARALEN® phosphate**

2 tablets daily for from 2 to 3 weeks—"because of the toxicity of emetine and because of the efficiency of chloroquine [Aralen], chloroquine has taken the place of emetine as the drug of choice."[3]

SUPPLIED: Milibis—tablets of 0.5 Gm.
Aralen phosphate—tablets of 0.25 Gm.

Winthrop-Stearns INC. NEW YORK 18, N. Y. • WINDSOR, ONT.

Milibis and Aralen, trademarks reg. U.S. Pat. Off.,
brand of glycobiarsol and chloroquine, respectively.

1. Martin, G. A., Garfinkel, B. T., Brooke, M. M., Weinstein, P. P., and Frye, W. W.: *J.A.M.A.*, 151:1055, Mar. 28, 1953.
2. Kohn, J.: *Jour. Trop. Med.*, 53:212, Nov., 1950.
3. Information Please: *GP*, 4:91, Sept., 1951.



BAKER'S

MODIFIED MILK

made from grade A milk*

"The first in infant feeding"

This statement is your assurance of the use of high quality, clean milk. Make a habit of looking for it on the label of the milk products which you prescribe for infant feeding.

The quality of the ingredients is reflected in the quality of the final product!

FEEDING DIRECTIONS		
	Baker's	Bailed Water
First 5 days of life	1 part	2 parts
Second 5 days	1 part	1½ parts
After 10th day	1 part	1 part

*U. S. Public Health Service Milk Code

THE BAKER LABORATORIES, INC.

Milk Products Exclusively for the Medical Profession

MAIN OFFICE: CLEVELAND 3, OHIO PLANT: EAST TROY, WISCONSIN

for strong, sturdy, solid growth



Lactum

LIQUID OR POWDERED

NUTRITIONALLY SOUND FORMULA FOR INFANTS

Lactum®-fed babies get all the proved benefits of a cow's milk and Dextri-Maltose® formula. Mothers appreciate the convenience and simplicity of this ready-prepared formula. Physicians are assured the important protein margin of safety for sturdy growth.



Lactum-fed babies are typically sturdy babies because Lactum supplies ample protein for sound growth and development.

The generous protein intake of babies fed milk and carbohydrate formulas such as Lactum promotes the formation of muscle mass. It also provides for good tissue turgor and excellent motor development.[1]

(1) Jeans, P. C., in A. M. A. Handbook of Nutrition, ed. 2, Philadelphia, Blakiston, 1951, pp. 275-278.

MEAD | SYMBOL OF SERVICE TO THE PHYSICIAN

MEAD JOHNSON & COMPANY · EVANSVILLE, INDIANA, U. S. A.

FICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

VIRGINIA MEDICAL MONTHLY

Contents

Future Prospects of Antimicrobial Therapy, Harrison F. Flippin . . . 435

Painful Non-Arthritic Disturbances of the Hand and Wrist, Elam C. Toone, Jr. and James Kawchak . . . 441

Premature Separation of the Normally Implanted Placenta, W. E. Studdiford and Wayne H. Decker . . . 444

The Cross and the Caduceus in this Atomic Age, Rev. John G. Lambrides . . . 451

(Continued on page 6)

THE N.Y. ACADEMY OF MEDICINE OCT 17 1955 LIBRARY

Strep sore throat responds readily to

ILOTYCIN

(Erythromycin, Lilly)

Temperature normal, throat culture negative, usually within twenty-four hours. Notably safe and well tolerated.

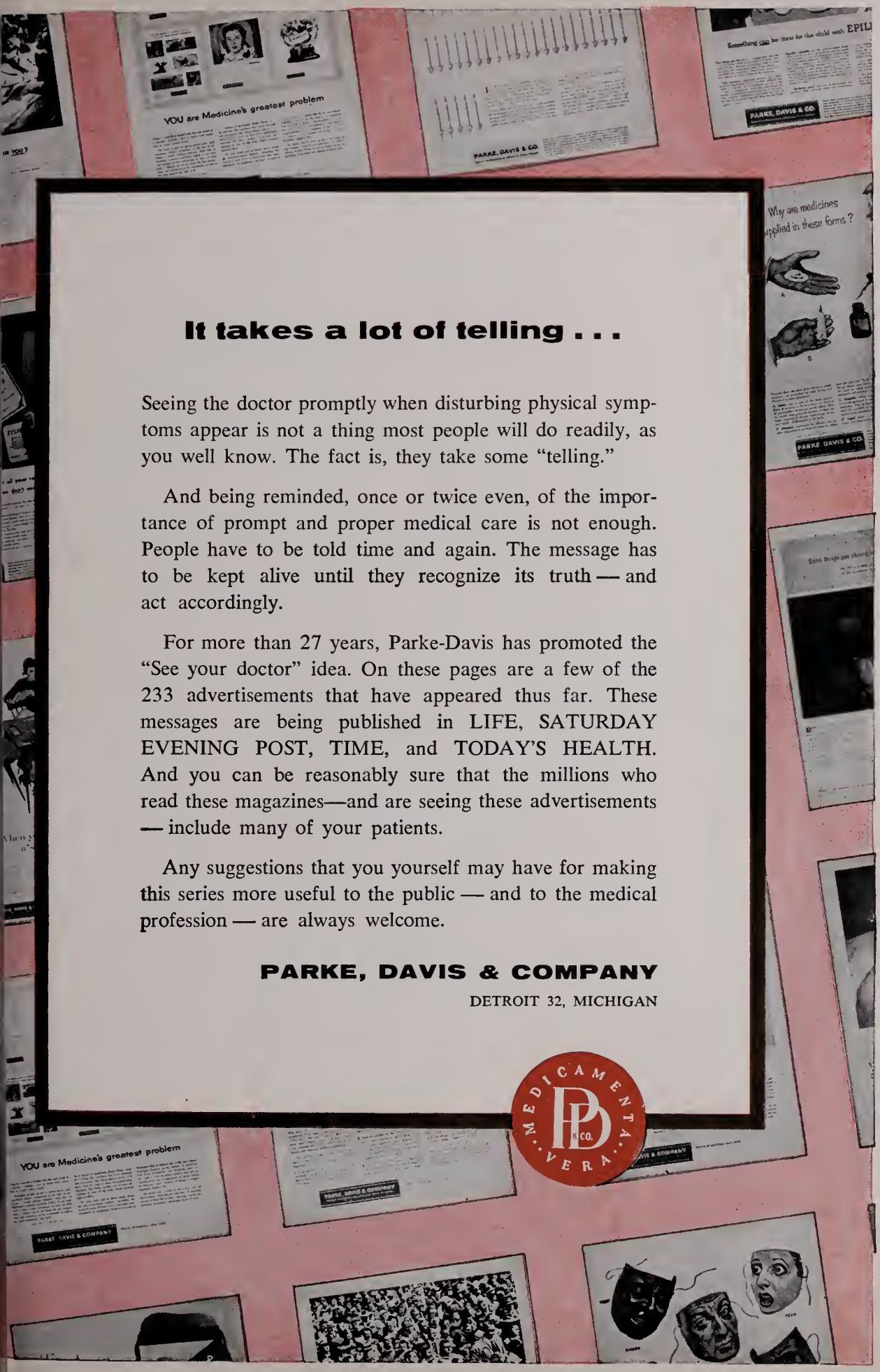
dosage: 1 to 1.5 Gm. daily in divided doses.

Lilly

532178

OCTOBER, 1955


PARKE, DAVIS & CO.
WESTERN UNION
Ever see a "telegram" from your heart?
Did Rheumatic Fever write a tragic ending to this picture story?
Let these experts on relaxing show you how to live with HIGH BLOOD PRESSURE
DO YOU KNOW THIS MAN?
How to select a family doctor
THE GIFT THEY NEVER GIFT-WRAP...
Something can be done for the child with EPILEPSY...
Is the source of cancer locked in this cell?
What part of every prescription weighs nothing at all?
Could you pass this medical quiz?
Which one open next



It takes a lot of telling . . .

Seeing the doctor promptly when disturbing physical symptoms appear is not a thing most people will do readily, as you well know. The fact is, they take some "telling."

And being reminded, once or twice even, of the importance of prompt and proper medical care is not enough. People have to be told time and again. The message has to be kept alive until they recognize its truth — and act accordingly.

For more than 27 years, Parke-Davis has promoted the "See your doctor" idea. On these pages are a few of the 233 advertisements that have appeared thus far. These messages are being published in LIFE, SATURDAY EVENING POST, TIME, and TODAY'S HEALTH. And you can be reasonably sure that the millions who read these magazines—and are seeing these advertisements — include many of your patients.

Any suggestions that you yourself may have for making this series more useful to the public — and to the medical profession — are always welcome.

PARKE, DAVIS & COMPANY

DETROIT 32, MICHIGAN

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April 1874)

Published monthly by The Medical Society of Virginia.

PUBLICATION COMMITTEE

Lewis H. Bosher, Jr., M.D., *Chairman and Editor*
Wyndham B. Blanton, M.D. Lloyd B. Burk, M.D.
with
EDITORIAL BOARD
J. Morrison Hutcheson, M.D.
Cato Drash, M.D.
Ennion S. Williams, M.D.
A. Brownley Hodges, M.D.
Hugh H. Trout, Jr., M.D.

The MONTHLY is not responsible for the opinions and statements of its contributors.

All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

Managing Editor—E. SPENCER WATKINS
1105 West Franklin Street, Richmond 20.

Annual Subscription—$2.00 Single Copies—25¢

Second-class mail privileges authorized at Richmond, Virginia

THE MEDICAL SOCIETY OF VIRGINIA

OFFICERS

President—CARRINGTON WILLIAMS, M.D., Richmond

President-Elect—JAMES P. KING, M.D., Radford

Vice-Presidents—JAMES W. LOVE, M.D., Alexandria
WAVERLY R. PAYNE, M.D., Newport News
BENJAMIN W. RAWLES, JR., M.D., Richmond

Executive Secretary-Treasurer—ROBERT I. HOWARD, Richmond

Councilors—A. A. CREECY, M.D., Newport News
WALTER P. ADAMS, M.D., Norfolk
GUY W. HORSLEY, M.D., Richmond
W. J. OZLIN, M.D., South Hill
L. P. BAILEY, M.D., Nathalie
FRANK A. FARMER, M.D., Roanoke
H. W. MILLER, M.D., Woodstock
McLEMORE BIRDSONG, M.D., Charlottesville
JAMES P. WILLIAMS, M.D., Richlands
HARRY C. BATES, JR., M.D., Arlington

Delegates to A.M.A.
J. M. HUTCHESON, M.D., Richmond
VINCENT W. ARCHER, M.D., Charlottesville

Alternate Delegates to A.M.A.
ALLEN BARKER, M.D., Roanoke
W. LINWOOD BALL, M.D., Richmond

Executive Office—1105 W. Franklin St., Richmond 20.

INDEX TO ADVERTISERS

Abbott 11, 21, 46-47
Ames Company, Inc. ..... Inside Back Cover
Appalachian Hall 39
Ayerst 19
Baker Laboratories, Inc., The 18
Burroughs Wellcome & Co. 48
Coca-Cola 7
Contra Company 24
Corn Products Refining Company 22
Davies, Rose & Co., Ltd. 49
Eli Lilly and Company ..... Front cover, 28
Foot-so-Port Shoe Company 44
Garst Bros. Dairy Inc. 33
Gill Memorial Eye, Ear and Throat Hospital, Inc. 34
Hennessy 6
Jefferson, A. G. 41
Johnston-Willis Hospital 31
Keeley Institute, The 33
Knox Gelatin Co., Inc., Chas. B. 42
Lakeside Laboratories, Inc. 9
Lederle Laboratories Division 16-17, 44
McGuire Clinic—St. Luke's Hospital 34
Mead Johnson & Company ..... Back Cover
Medical College of Virginia 31
Medicine in Virginia 6
New York Polyclinic Medical School and Hospital, The 25
Parke, Davis & Company 2-3
Patterson's Safe Service Drug Stores 41
Peoples Drug Stores, Inc. 13
Pfizer Laboratories 12, 52
Plyler's Nursing Home, Mrs. 38
Richmond Eye Hospital—Richmond Ear, Nose and Throat Hospital 37
Richmond Hotels Incorporated 41
Riverside Convalescent Home 36
Riverside Hospital 37
Saint Albans 30
Schering 26-27
Sealy Mattress Company 49
Searle 29
Sharp & Dohme 5, 7, 14, 25, 33, 34, 40, 45
State Board of Medical Examiners of Virginia, The 41
St. Elizabeth's Hospital 38
Stuart Circle Hospital 39
Terrace Hill Nursing Home, Inc. 35
Thompson Homestead School, The 41
Tucker Hospital Inc. 40
United States Brewers Foundation 8
Upjohn 6, 19, 31, 36
U.S. Savings Bonds 50
Valentine Company, Inc. 44
Viceroy Cigarettes 10
Virginia Bakers Council, The 43
Virginia Medical Monthly 4
Westbrook Sanatorium 30
White Cross Hospital 32
Williams Printing Co. 14
Wine Advisory Board 20
Winthrop-Stearns, Inc. 15
Wyeth 23, 51

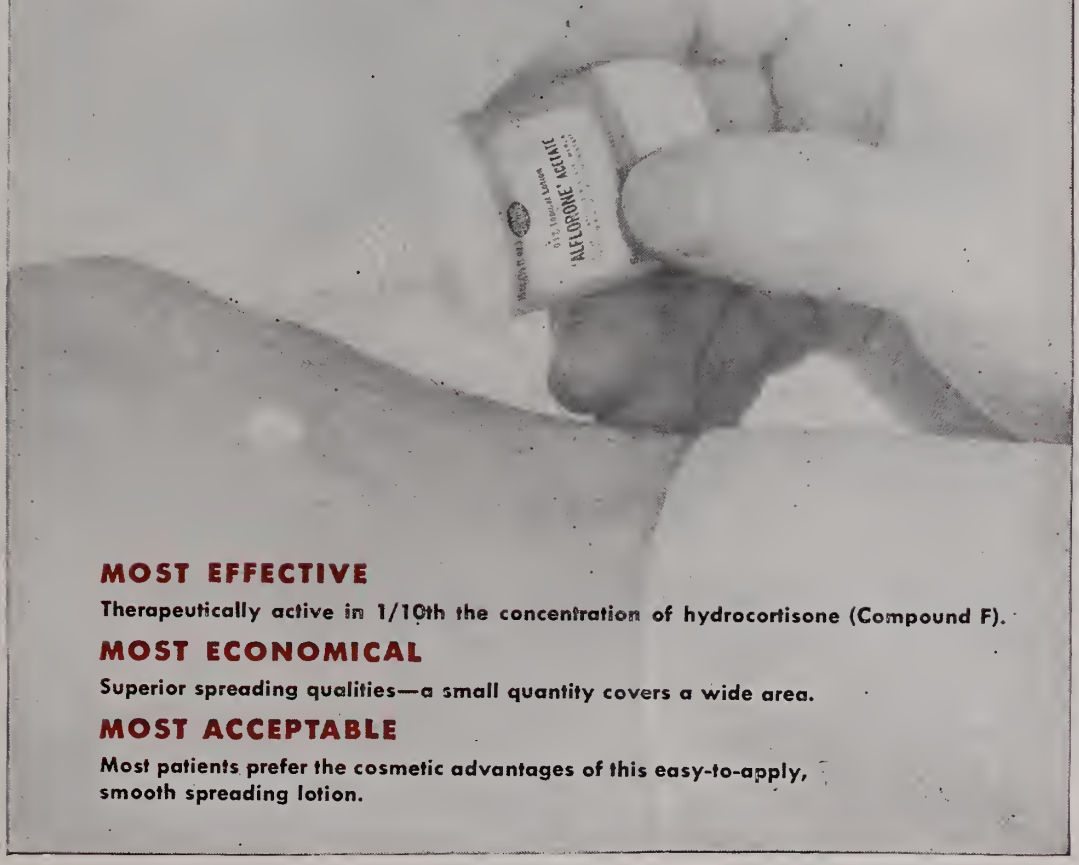
WEIGHT FOR WEIGHT,
THE MOST ACTIVE ANTI-INFLAMMATORY
AGENT YET DEVELOPED
FOR TOPICAL USE

TOPICAL LOTION

'ALFLORONE'

ACETATE

(FLUDROCORTISONE ACETATE, MERCK) 9 ALPHA-FLUOROHYDROCORTISONE ACETATE



MOST EFFECTIVE

Therapeutically active in 1/10th the concentration of hydrocortisone (Compound F).

MOST ECONOMICAL

Superior spreading qualities—a small quantity covers a wide area.

MOST ACCEPTABLE

Most patients prefer the cosmetic advantages of this easy-to-apply, smooth spreading lotion.

Supplied: Topical Lotion Alflorone Acetate: 0.1% and 0.25%, in 15-cc. plastic squeeze bottles. Topical Ointment Alflorone Acetate: 0.1% and 0.25%, 5-Gm., 15-Gm., and 30-Gm. tubes.

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

Upjohn
KALAMAZOO

Indicated wherever oral cortisone or hydrocortisone is effective. Available in 5 mg. tablets in bottles of 30 and 100. Usual dosage is ½ to 1 tablet three or four times daily

Deltasone*

requires only 1/5 the dose of cortisone

*Trademark for the Upjohn brand of prednisone (delta-1-cortisone)

In very special cases
A very superior Brandy



SPECIFY ★ ★ ★
HENNESSY
THE WORLD'S PREFERRED COGNAC BRANDY
84 PROOF Schieffelin & Company, New York, N.Y.

MEDICINE IN VIRGINIA
17th, 18th and 19th Centuries
By Wyndham B. Blanton, M.D.

Reduced Price to Members of
The Medical Society of Virginia
3 Volumes for $5.75

Order Through
THE MEDICAL SOCIETY OF VIRGINIA
P. O. Box 5085 Richmond 20, Va.

CONTENTS
(Continued)

Medico-Legal Notes ---- 454
Public Health ---- 456
Mental Health ---- 458
The Medical Society of Virginia ---- 460
President's Message ---- 479
Editorial ---- 480
News ---- 482
Obituaries ---- 484

INDEX TO ADVERTISERS—Page 4

Entered as Second Class Matter at the Postoffice, Richmond, Va.

Relax the best way ... pause for Coke



Time out for refreshment

DRINK Coca-Cola
REG. U.S. PAT. OFF.



1950 Cortone®	1952 Hydrocortone®
1954 'Alflorone'	1955 'Hydeltra'

DELTRA® tablets

(Prednisone, Merck)

2.5 mg. - 5 mg. (scored)

the delta$_1$ analogue of cortisone

Indications:

Rheumatoid arthritis

Bronchial asthma

Inflammatory skin conditions

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

Making the Diabetic Diet fit...

Your patient may feel an outsider both at home and away from home when diabetes upsets his eating habits. Of course, a measured diet is vital. The trick is to fit that diet as closely as possible to the patient's personal preferences and way of life. Here are some diet "do's" to help in planning the menus.



At home—

Try to adapt favorite recipes to the diabetic diet: Then select vegetables, beverage, and fruit or dessert to complete the diet prescription for the meal.

Suggest that measured portions be served in dishes that fit the serving. A small portion on a large plate is not a happy prospect.

Where possible, let your patient use a food exchange list. He'll delight in the variations it provides.

Away from home—

Explain that insulin demands food with the urgency and regularity of an alarm clock. If a dinner party will be late, suggest a light snack at the usual mealtime with a corresponding caloric reduction in the delayed meal.

Allow extra carbohydrate for extra activity. And have your patient carry hard candies as a precaution against insulin reaction.

If possible, plan low-calorie wafers in the diet for times when others nibble canapés or chocolates.

A diet that fits in smoothly with your patient's family and social life means you'll have his fullest co-operation, and he'll lead a happier life.

United States Brewers Foundation

Beer—America's Beverage of Moderation

Carb. 9.4; Prot. 0.8; Fat 0; Cal. 104/8 oz.*

If you'd like reprints of 12 different diets, please write United States Brewers Foundation, 535 Fifth Avenue, New York 17, N. Y.

*Average of American beers

does your diuretic cause acidosis?

know your diuretic



diuresis without depletion of alkaline reserve—avoiding dangers of acid-base imbalance—is characteristic of the organomercurials. In contrast, the diuretic activity of carbonic anhydrase inhibitors, acidifying salts, and the resins depends on production of acidosis.

TABLET

NEOHYDRIN®

BRAND OF CHLORMERODRIN

(18.3 MG. OF 3-CHLOROMERCURI-2-METHOXY-PROPYLUREA IN EACH TABLET)

- action not dependent on production of acidosis
- no "rest" periods... no refractoriness

a standard for initial control of severe failure

MERCUHYDRIN®

BRAND OF MERALLURIDE INJECTION

SODIUM

Leadership in diuretic research

Lakeside LABORATORIES, INC., MILWAUKEE 1, WISCONSIN

88755

In a Filter Cigarette...
it's the Filter You Depend on



The VICEROY filter tip contains 20,000 tiny filter traps, made through the solubilization of pure natural material. This is twice as many of these filter traps as any other brand.

We believe this simple fact is one of the principal reasons why so many doctors smoke *and* recommend VICEROY—the cigarette you can *really* depend on!

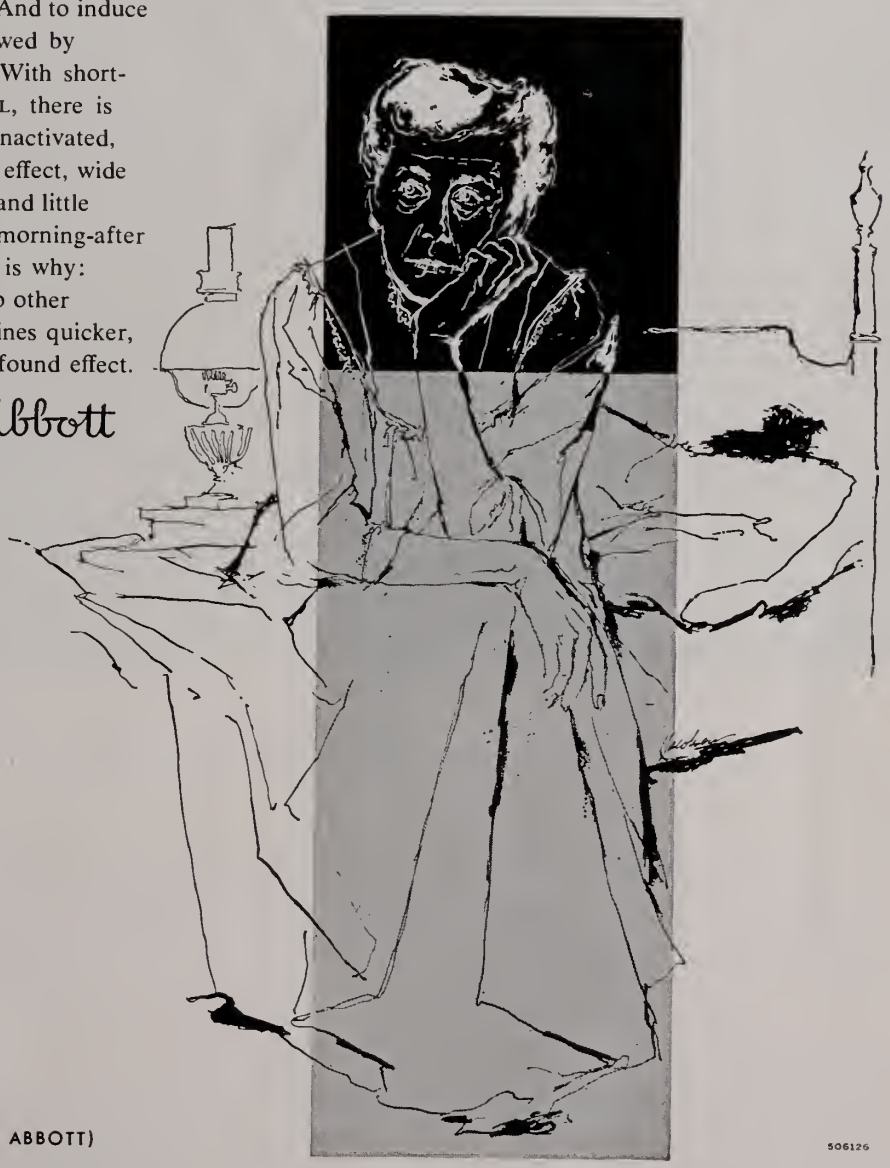


It's well past midnight. Again.
And still her night keeps
ticking away: no sleep . . . no
rest . . . no sleep . . . no rest.
If she were your patient, you'd
relieve her insomnia with—

short-acting **NEMBUTAL®**

A dose of only ¾ to 1-gr.
is enough to erase anxiety,
worries, tension. And to induce
drowsiness, followed by
refreshing sleep. With short-
acting NEMBUTAL, there is
little drug to be inactivated,
short duration of effect, wide
margin of safety and little
tendency toward morning-after
hangover. Which is why:
in equal doses, no other
barbiturate combines quicker,
briefer, more profound effect.

Abbott



® (PENTOBARBITAL, ABBOTT)

506126



***Tetracycline* "... *appears to be superior* [*to oxytetracycline and chlortetracycline*]... *because it is more stable at room temperature, because it penetrates better into the cerebrospinal fluid and elsewhere, and because its administration is accompanied by less untoward effects.*"**

Dowling, H. F.: Practitioner 174:611 (May) 1955.

excellent therapeutic response

with **Tetracyn®**

BRAND OF TETRACYCLINE

the original tetracycline

outstanding among modern broad-spectrum antibiotics

discovered and identified by *Pfizer*

Tablets and Capsules, 50, 100 and 250 mg.,
Oral Suspension (chocolate flavored),
Pediatric Drops (banana flavored), Intravenous,
and convenient ophthalmic and topical forms.

PFIZER LABORATORIES, DIVISION, CHAS. PFIZER & CO., INC., BROOKLYN 6, N. Y.

One of a Series of Newspaper Ads Directed to Your Patients and Our Customers....

PEOPLES DRUG STORES INC

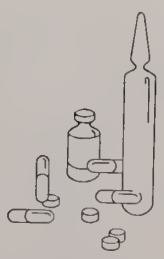
THANKS TO HIS DOCTOR

he has smoother sailing on a longer "cruise" through life



Two big changes have taken place among older folks. (1) They live longer. (Life expectancy has been increased by 20 years in the last 40.) (2) Modern medicine is making those extra years healthier. The aged have more to do, more interest in life, and better health for their added years.

Peoples joins in the fight to extend life and good health. As with all prescriptions at Peoples, your doctor's geriatric prescriptions are compounded accurately and quickly. And, of course, your prescription is priced with uniform economy at Peoples Service Drug Store.



PEOPLES *Certified* PRESCRIPTIONS

AT ALL PEOPLES SERVICE DRUG STORES

...just what the doctor ordered

© 1955 PEOPLES DRUG STORES, INC.

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets

(PREDNISOLONE, MERCK)

2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

SHARP & DOHME

Philadelphia 1, Pa.
Division of Merck & Co., Inc.

Complete
Printing and Binding Service

Commercial, Book and Job Work, Catalogues—Publications
Advertising Literature, Booklets—Broadsides
Office and Factory Forms
Loose-Leaf and Manifold Forms—Ledger Leaves and Loose-Leaf Binders
Paper Ruling
Complete Binding Equipment

Complete Service Under One Roof

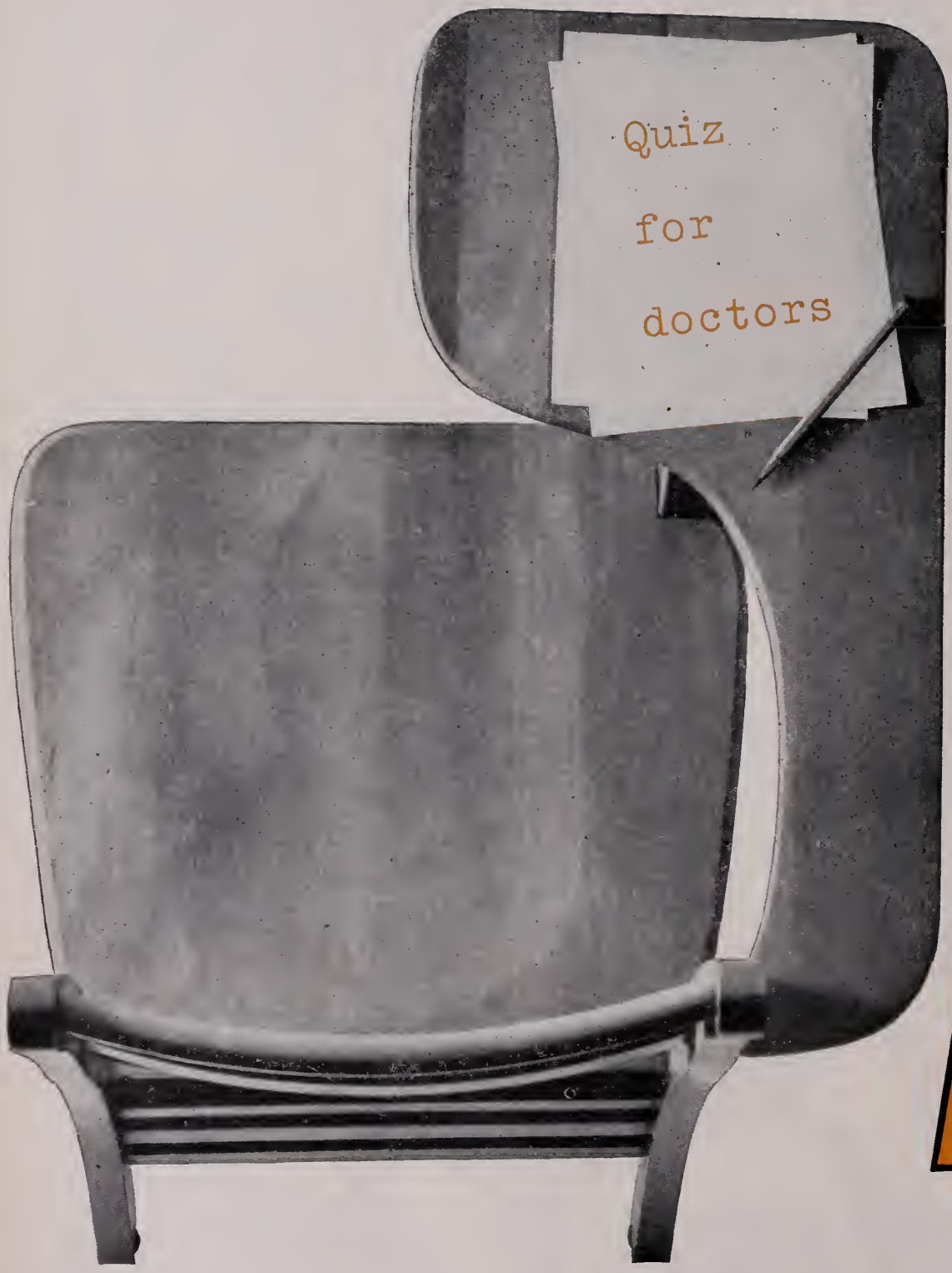
Acquaint us with your requirements. We serve you efficiently and economically.

Dial 3-1881

WILLIAMS PRINTING CO.

11-13-15 North Fourteenth Street RICHMOND, VIRGINIA


For Nasal Congestion
in THE COMMON COLD
Physiologically acceptable Neo-Synephrine hydrochloride solution promptly constricts the engorged nasal capillaries which are responsible for nasal congestion in the common cold. When the nasal mucosa is reduced to its normal state, the nasal passages resume their proper patency, drainage is possible, and the patient can again breathe freely.
By its shrinking action on the nasal mucosa, Neo-Synephrine helps to keep the sinuses aerated and the openings to the eustachian tubes clear.
Neo-Synephrine within minutes produces decongestion that lasts for hours.
NEO-SYNEPHRINE®
Hydrochloride
DOSAGE FORMS Solutions: 0.25% — 0.25% (aromatic) — 0.5% — 1% —
Emulsion 0.25% — Jelly 0.5%
Nasal Spray 0.5% (plastic, unbreakable squeeze bottle)
Nasal Spray Pediatric 0.25% (new introduction)
Contains Zephiran® Cl 0.02% (1:5000), antibacterial wetting agent and preservative for greater efficiency.
Winthrop-Stearns INC. NEW YORK 18, N.Y. WINDSOR, ONT.
Neo-Synephrine
(brand of phenylephrine),
trademark reg. U.S. Pat. Off.



AC

(you probably know every answer!)

Q. Which is today's most widely prescribed broad-spectrum antibiotic?

A. ACHROMYCIN — it's first by many thousands of prescriptions.

Q. What are some of the advantages of ACHROMYCIN?

A. Wide spectrum of effectiveness.
Rapid diffusion and penetration.
Negligible side effects.

Q. Exactly how broad is the spectrum of ACHROMYCIN?

A. It has proved effective against a wide variety of infections, caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa.

Q. In what way are ACHROMYCIN Capsules advantageous?

A. For rapid and complete absorption they are dry-filled, sealed capsules (a Lederle exclusive!) No oils, no paste...tamperproof.

Q. Who makes ACHROMYCIN?

A. It is produced — every gram — under rigid quality control in Lederle's own laboratories and is available only under the Lederle label.

HROMYCIN*

Hydrochloride
Tetracycline HCl Lederle

Lederle

LEDERLE LABORATORIES DIVISION AMERICAN Cyanamid COMPANY PEARL RIVER, NEW YORK

*REG. U.S. PAT. OFF.

for

quality simplicity economy

in Infant Feeding

BAKER'S MODIFIED MILK

quality—Made from Grade A Milk (U. S. Public Health Service Milk Code) assuring maximum purity and cleanliness.

simplicity—Merely dilute Baker's (liquid form) with an equal amount of water, previously boiled.

economy—Contains adequate amounts of all known essential vitamins. Expensive supplemental vitamins need not be prescribed.

Baker's Modified Milk is supplied gratis to all hospitals.



Baker's Modified Milk is available in both powder and liquid forms.

FEEDING DIRECTIONS (Liquid)		
	Baker's	Bailed Water
First 5 days of life	1 part	2 parts
Secand 5 days	1 part	1½ parts
After 10th day	1 part	1 part

Pawder — Normal dilution one tablespoon to 2 aunces of water.

THE BAKER LABORATORIES, INC.

Milk Products Exclusively for the Medical Profession

Main Office: **Cleveland 3, Ohio** • ***Plant:*** **East Troy, Wisconsin**

Upjohn
KALAMAZOO

Indicated wherever oral cortisone or hydrocortisone is effective • Available in 5 mg. tablets in bottles of 30 and 100, and in 1 mg. tablets in bottles of 100 • Usual dosage is ½ to 1 tablet three or four times daily

Delta-Cortef*

requires only 1/3 the dose of hydrocortisone

*Trademark for the Upjohn brand of prednisolone (delta-1-hydrocortisone)

With "Premarin," relief of menopausal distress is prompt and the "sense of well-being" imparted is highly gratifying to the patient.

"Premarin"® — Conjugated Estrogens (equine)

5513

Add Elegance and Appetite-Appeal

to the Sick-Tray

THERE'S anticipated pleasure when the patient sees an appetizing, colorful glass of wine on the table or tray—wine adds that touch of "elegance" which gives a psychological lift at a time when it is most needed.

And there are also well-authenticated physiological reasons to account for the valuable role of wine as a nutrient beverage for the convalescent and the aging patient:

Recent controlled research shows that just 2 or 3 oz. of a dry wine can markedly increase olfactory acuity, increase the desire for food (as in anorexia) and actually aid digestion.

The effect of wine on free and total gastric acidity has been found to differ markedly from that of plain alcohol. Because of the buffering action of its phosphates, organic acids and tannins, the action of wine is gentler and more prolonged.

Wine is also notable for other desirable vasodilating, diuretic, and relaxant properties, and helps to allay restlessness and irritability in the sick and elderly.

A little Port or Sherry at bedtime affords a valuable aid to normal sleep and may obviate the need for sedative medication.

Recent results of laboratory and clinical research on the medical attributes of wine have been condensed into a small brochure entitled "Uses of Wine in Medical Practice." A copy is available to you—at no expense—by writing to: Wine Advisory Board, 717 Market Street, San Francisco 3, California.

itching,

scaling,

burning

keep returning?



your patient needs

SELSUN®



SELSUN acts quickly to relieve seborrheic dermatitis of the scalp. Itching and burning symptoms disappear with just two or three applications — scaling is controlled with just six or eight applications. And SELSUN is effective in 81 to 87 per cent of all seborrheic dermatitis cases, 92 to 95 per cent of dandruff cases. Easy to use, SELSUN is applied and rinsed out while washing the hair. Takes little time, no messy ointments or involved procedures. Prescribe the 4-fluidounce bottle for all your seborrheic dermatitis patients. Complete directions are on label. Abbott



502055

®SELSUN *Sulfide Suspension/Selenium Sulfide, Abbott*





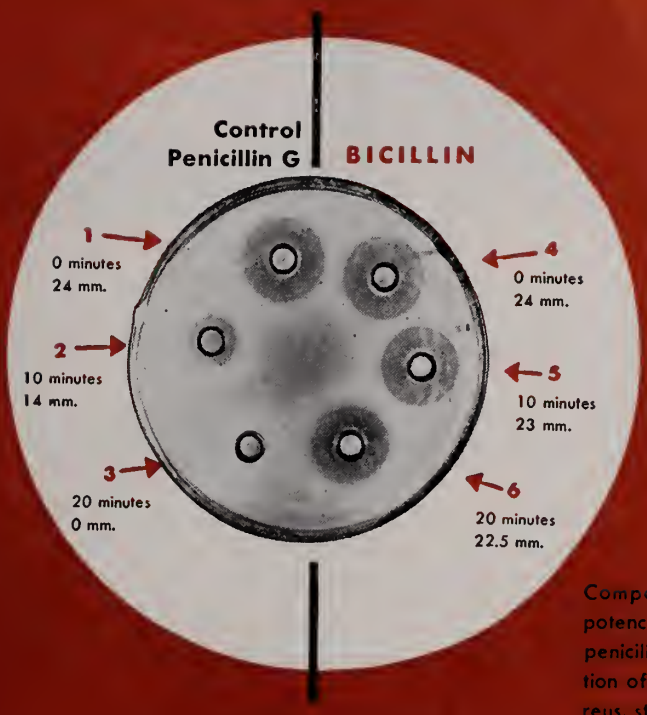
The individualized formula is the foundation of the infant's health and future development

For 3 generations KARO has been the foundation of the individualized formula

Karo is well tolerated, easily digested, gradually absorbed at spaced intervals and completely utilized. It is a balanced fluid mixture of maltose, dextrins and dextrose readily soluble in fluid whole or evaporated milk. *Precludes* fermentation and irritation. Produces no intestinal reactions. Is hypo-allergenic. Bacteria-free Karo is safe for feeding prematures, newborns, and infants—well and sick.

Light and dark Karo are interchangeable in formulas; both yield 60 calories per tablespoon.

CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.



Comparing antibacterial potency of two unbuffered penicillins. Zones of inhibition of Staphylococcus aureus, strain 209 P.

Protected Penicillin means **Systemic** Penicillin

Oral BICILLIN is *self-protected* penicillin because it protects itself against gastric destruction. This unique quality is the result of a molecular structure that gives Oral BICILLIN high durability in gastric acid,[1] effectively guarding the penicillin for its antibacterial role. Administer without regard to meals.

1. American Medical Association: New and Nonofficial Remedies. J. B. Lippincott Co., Philadelphia, 1954, p. 147.

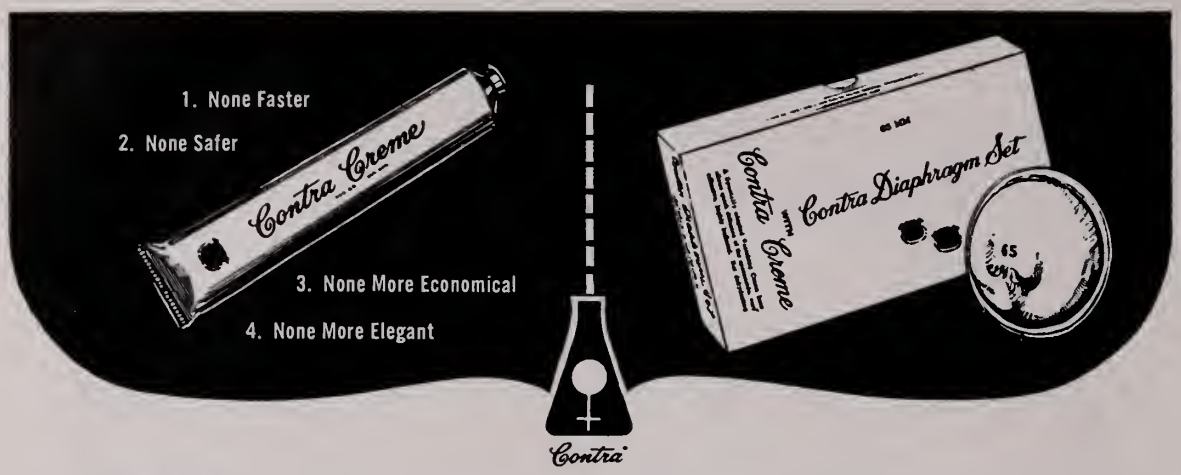
Wyeth
Philadelphia 2, Pa.

TABLETS SUSPENSION

oral BICILLIN®

Benzathine Penicillin G (Dibenzylethylenediamine Dipenicillin G)

Penicillin with a Surety Factor



When conception is contraindicated

use Contra® Creme

First AMA accepted phenyl mercuric acetate contraceptive[1]. CONTRA CREME provides more of the active... most spermicidal substance known[2] ... phenyl mercuric acetate 0.06% than any other Council Accepted product. CONTRA CREME kills spermatozoa the fastest time recognized by the AMA. This has been consistently shown throughout the years to be from 2 to 5 minutes by the Brown and Gamble technique.[3,4,5,6,7,8]

and Contra® diaphragms

The DIAPHRAGM with a two year warranteed guarantee against deterioration and defects. Upon the purchase of any CONTRA DIAPHRAGM a warranteed card is given for two years of normal wear when used with CONTRA CREME. Evidence of harmlessness and efficacy have been furnished by competent medical investigators specializing in gynecology and obstetrics demonstrating long shelf life and use life.

REFERENCES:

1. James, W. F. B.: A Study Of A Simple Contraceptive Method For Clinic And Private Patients. West, J. Surg. Gyn & Ob., 59: 197, 1952. 2. Baker, J. R., Ranson, R. M. and Tynen, J.: A New Chemical Contraceptive, Lancet, P 882,, Oct. 15, 1938. 3. Report To The Council On Pharmacy And Chemistry Of The AMA: JAMA 148: 50, 1952. 4. Gamble, C. J. and Brown, R. L.: Relative Spermacidal Times of Commercial Contraceptives, Scientific Exhibit AMA Meeting, June, 1941. 5. Brown, R. L., Levenstein, I. and Becker, B.: The Spermacidal Times of Samples of Commercial Contraceptives Secured in 1942, Human Fertility 8: 65, 1943. 6. Becker, B. and Gamble, C. J.,: The Spermacidal Times of Samples of Contraceptives Secured in 1943, Human Fertility 9: 6, 1944. 7. Ibid: The Spermacidal Times of Contraceptive Jellies and Creams Secured in 1946, 11: 111, 1946. 8. New and Non Official Remedies, 1946.

For your own office prescription needs, use convenient order form below.

ORDER FORM

Contra Company **13 West 46th Street, New York 36, N. Y.**

Please enter my order as follows: Date_____

Contra Diaphragm Sets Sizes 50mm thru 95mm (Specify sizes)

Size_____ Quantity_____ $18.00 per dozen

Contra Creme B (without applicator) Quantity_____ 9.00 per dozen

Contra Creme A (with applicator) Quantity_____ 10.80 per dozen

Contra Inserters (plastic) Quantity_____ 7.20 per dozen

Shipped prepaid in quantities of 3 or more. Check with order less 2%. Open Account_____

Signed_____ M. D.

Address_____

Please stock my druggist whose name and address follows:

THE NEW YORK POLYCLINIC
MEDICAL SCHOOL AND HOSPITAL

(Organized 1881)

(The Pioneer Post-Graduate Medical Institute in America)

SURGERY and ALLIED SUBJECTS

A two months full time combined surgical course comprising general surgery, traumatic surgery, abdominal surgery, gastroenterology, proctology, gynecological surgery, urological surgery. Attendance at lectures, witnessing operations, examination of patients preoperatively and postoperatively and follow-up in the wards postoperatively. Pathology, radiology, physical medicine, anesthesia. Cadaver demonstrations in surgical anatomy, thoracic surgery, proctology, orthopedics. Operative surgery and operative gynecology on the cadaver. Attendance at departmental and general conferences.

Course for GENERAL PRACTITIONERS

Intensive full time instruction covering those subjects which are of particular interest to the physician in general practice. Fundamentals of the various medical and surgical specialties designed as a practical review of established procedures and recent advances in medicine and surgery. Subjects related to general medicine are covered and the surgical departments participate in giving fundamental instruction in their specialties. Pathology and radiology are included. The class is expected to attend departmental and general conferences.

RADIOLOGY

A comprehensive review of the physics and higher mathematics involved, film interpretation, all standard general roentgen diagnostic procedures, methods of application and doses of radiation therapy, both x-ray and radium, standard and special fluoroscopic procedures. A review of dermatological lesions and tumors susceptible to roentgen therapy is given, together with methods and dosage calculation of treatments. Special attention is given to the newer diagnostic methods associated with the employment of contrast media, such as bronchography with Lipiodol, uterosalpingography, visualization of cardiac chambers, perirenal insufflation and myelography. Discussions covering roentgen departmental management are also included; attendance at departmental and general conferences.

DERMATOLOGY AND SYPHILOLOGY

A three year course fulfilling all the requirements of the American Board of Dermatology and Syphilology. Also five-day seminars in Dermatopathology, for specialists and for general practitioners.

For Information concerning these and other Courses please Address:

THE DEAN, 345 West 50th St., New York 19, N. Y.

1950 Cortone® | 1952 Hydrocortone®

1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets

(PREDNISOLONE, MERCK) 2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

SHARP & DOHME

Philadelphia 1, Pa.

DIVISION OF MERCK & CO., INC.

Indications: *Rheumatoid arthritis*

Bronchial asthma

Inflammatory skin conditions

now available
for clinical use.

METICORT

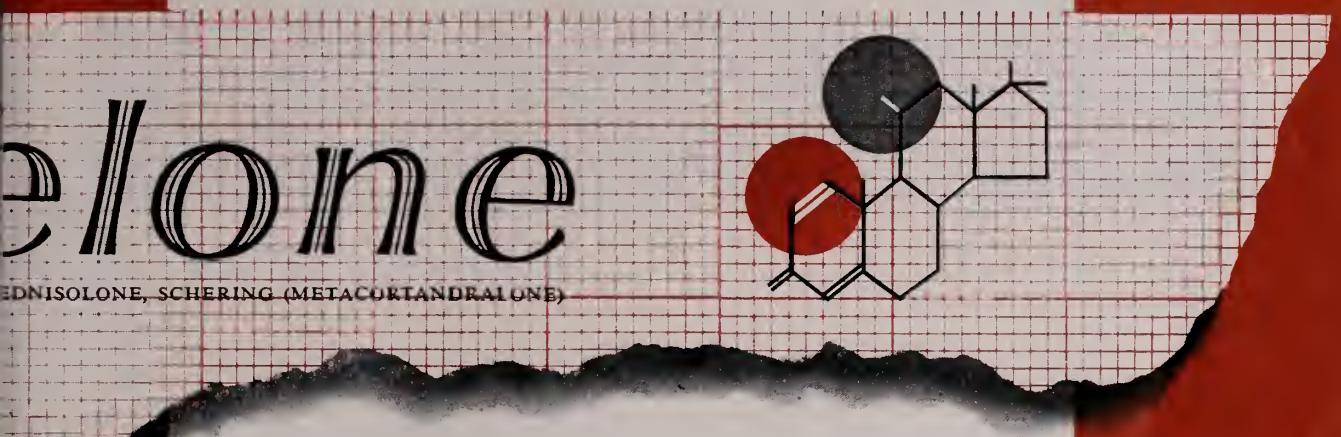
"possesses an augmented therapeutic ratio"[1]
in cortical hormone therap

Schering

METICORTELONE possesses antirheumatic and anti-inflammatory effectiveness and hormonal properties similar to those of METICORTEN,[1-5] the first of the new Schering corticosteroids. Both are three to five times as potent, milligram for milligram, as oral cortisone or hydrocortisone. METICORTELONE and METICORTEN therapy is seldom associated with significant water or electrolyte disturbances.

METICORTELONE is an analogue of hydrocortisone, as METICORTEN is of cortisone. The availability of these new steroids, both discovered and introduced by Schering, provides the physician with two therapeutic agents of approximately equal effectiveness.

METICORTELONE is now available as 5 mg. buff-colored tablets, scored, bottles of 30 and 100. In the treatment of rheumatoid arthritis, dosage begins with an average of 20 to 30 mg. (4 to 6 tablets) a day. This is gradually reduced by 2.5 to 5 mg. until daily maintenance dosage, which may be between 5 to 20 mg., is reached. The total 24-hour dose should be divided into four parts and administered *after meals and at bedtime*. Patients may be transferred directly from hydrocortisone or cortisone to METICORTELONE without difficulty.



Bibliography: (1) Bunim, J. J.; Pechet, M. M., and Bollet, A. J.: J.A.M.A. *157*:311, 1955. (2) Waine, H.: Bull. Rheumat. Dis. *5*:81, 1955. (3) Tolksdorf, S., and Perlman, P.: Fed. Proc. *14*:377, 1955. (4) Herzog, H. L., and others: Science *121*:176, 1955. (5) King, J. H., and Weimer, J. R.: Experimental and clinical studies on METICORTEN (prednisone) and METICORTELONE (prednisolone) in ophthalmology, A.M.A. Arch. Ophth., to be published. (6) Boland, E. W.: California Med. *82*:65, 1955; abs. Curr. M. Digest *22*:53, 1955. (7) Dordick, J. R., and Gluck, E. J.: J.A.M.A. *158*:166, 1955. (8) Margolis, H. M., and others: J.A.M.A. *158*:454, 1955. (9) Barach, A. L.; Bickerman, H. A., and Beck, G. J.: Dis. Chest *27*:515, 1955. (10) Arbesman, C. E., and Ehrenreich, R. J.: J. Allergy *26*:189, 1955. (11) Skaggs, J. T.; Bernstein, J., and Cooke, R. A.: J. Allergy *26*:201, 1955. (12) Schwartz, E.: J. Allergy, *26*:206, 1955. (13) Robinson, H. M., Jr.: J.A.M.A. *158*:473, 1955. (14) Dordick, J. R., and Gluck, E.: Preliminary Clinical trials with prednisone (METICORTEN) in systemic lupus erythematosus, A.M.A. Arch. Dermat. & Syph., in press. (15) Nelson, C. T.: J. Invest. Dermat. *24*:377, 1955.

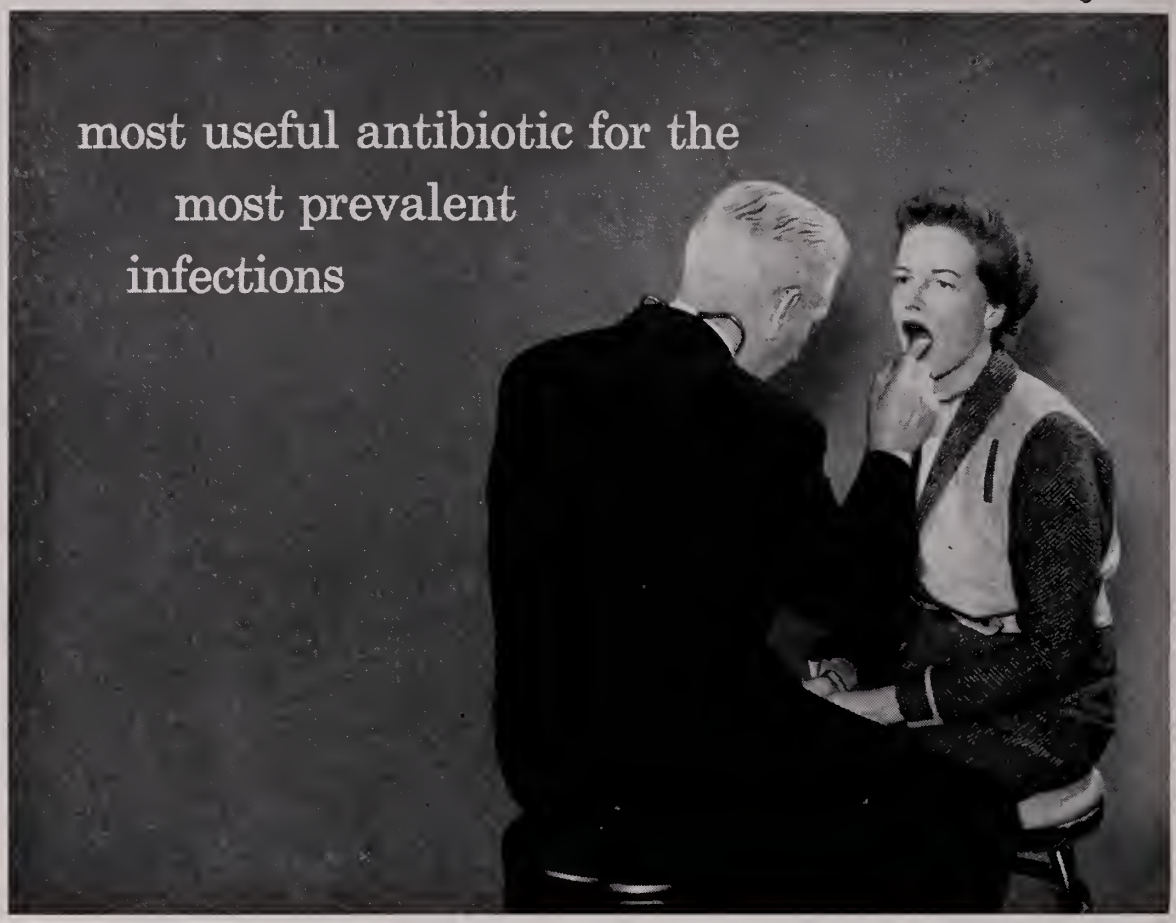
first of the new Schering corticosteroids

METICORTEN

PREDNISONE, SCHERING (METACORTANDRACIN)

- replacing the older corticosteroids in
  rheumatoid arthritis[1,2,6-8]
  intractable asthma[9-12]
  eye disorders[5]
  certain skin disorders such as disseminated lupus erythematosus,[13,14] acute pemphigus,[13,15] atopic dermatitis[15] and other allergic dermatoses
- more active than hydrocortisone or cortisone, milligram for milligram
- relatively free of significant water or electrolyte disturbances [5]

METICORTEN is available as 5 mg. scored, white tablets in bottles of 30 and 100.
METICORTELONE,* brand of prednisolone (metacortandralone).
METICORTEN,* brand of prednisone (metacortandracin). ML-J-58 *T.M.



532179

'Ilotycin'

(ERYTHROMYCIN, LILLY)

Over 96% of all acute bacterial respiratory infections respond readily

'Ilotycin' kills susceptible pathogens of the respiratory tract. Therefore, the response is decisive and quick. Bacterial complications such as otitis media, chronic tonsillitis, and pyelitis are less likely to occur.

Most pathogens of the respiratory tract are rapidly destroyed. Yet, because the coliform bacilli are highly insensitive, the bacterial balance of the intestine is seldom disturbed.

'Ilotycin' is notably safe and well tolerated. Urticaria, hives, and anaphylactic reactions have not been reported in the literature.

Staphylococcus enteritis, avitaminosis, and moniliasis have not been encountered.

Gastro-intestinal hypermotility is not observed in bed patients and is seen in only a small percentage of ambulant patients.

Available as specially coated tablets, pediatric suspensions, I.V. and I.M. ampoules.

Lilly

QUALITY / RESEARCH / INTEGRITY

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U.S.A.

The Virginia
MEDICAL
MONTHLY

October, 1955
Vol. 82, No 10
Whole No. 1240

Future Prospects of Antimicrobial Therapy

HARRISON F. FLIPPIN, M.D.
Philadelphia, Pennsylvania

THE recent prodigious advances in the field of anti-infective agents exert a profound influence on the practice of medicine, as, within the span of less than a quarter of a century, it has become possible to effect dramatic cures in a large percentage of patients suffering from diseases previously dreaded, as well as to prevent diseases which formerly proved disastrous. Certainly the advent of these antimicrobial agents represents one of the greatest discoveries of recent years, but, just as each new discovery in medicine increases our knowledge and opens up new avenues of approach, it simultaneously imposes new challenges and increases our ignorance. The antimicrobial agents are no exception to the adage—"All is not gold that glitters." Administration of these agents has resulted in certain undesirable consequences which constitute new and serious problems in the medical care of patients.

From the beginning of time there has existed a continuous conflict between Man and microorganisms, and today we find the bacterial world revolting violently against Man's chemical attack upon its population. Many of these microorganisms, if uncontrolled, are deadly enemies to Man; others are harmless, whereas some are essential to Man's survival. Fortunately, a number of the harmful bacteria have succumbed to the anti-microbial agents; some have survived because of their effective protective mechanisms against these drugs, and others—which were initially stunned—have developed new defenses and are back on the firing line. Furthermore, others which ordinarily are not injurious to Man, have become agitated and are now pathogenic to Man. Since these chemotherapeutic agents have no respect for members of the bacterial world, we find that, in the process of successfully combating a disease state, often bacteria—which are helpful to Man in his struggle for existence—are destroyed.

For the most part, every known chemical substance can produce a toxic reaction in Man if the exposure is adequate, thus making the use of these chemotherapeutic drugs by Man a potential hazard. Each chemical agent has a non-toxic and a toxic dose thereby making variable the factor of exposure. Furthermore, the severity of toxicity varies greatly with the method of administration, the degree and duration of the drugs used, and the condition of the patient. Unfortunately, the toxicity of chemical substances for use in Man cannot be determined conclusively on animals, although toxicity studies involving animals alone can give reasonable assurance that the drug may be tried in Man with some degree of safety. However, no criteria involving animals alone can prove toxicity or non-toxicity for Man, thus making necessary toxicity determinations by human experimentation.

As a result of the above factors, we are confronted today with certain serious and unsolved problems relating to the use of these antimicrobial agents —namely, an increasing number of drug-resistant organisms, infections caused by microorganisms usually regarded as non-pathogenic, which occur during antibiotic therapy that prove insensitive to the drug being employed, as well as the toxic reactions of these therapeutic agents.

Drug-Resistant Infections

The widespread and indiscriminate use of the antimicrobial agents has resulted in an increased

HARRISON F. FLIPPIN, M.D., *Professor of Clinical Microbiology, the Graduate School of Medicine, University of Pennsylvania.*

Presented before the Fifth Annual Scientific Assembly of the Virginia Academy of General Practice, Old Point Comfort, Virginia, May 14, 1955.
Received for publication May 19, 1955.

number of drug-resistant bacteria. This increased microbial resistance following exposure to an antibiotic not only holds for the antibiotic itself but also the possibility of the development of cross-resistance to other antibiotics exists. In considering this problem of drug-resistant infections, one must distinguish between the natural and the acquired resistance of microorganisms. Natural resistance or susceptibility to these agents vary widely among bacterial species, as well as among different strains of a given species. Acquired resistance for the most part results from continued exposure to sub-inhibitory concentrations of these drugs. The development of resistance to streptomycin often occurs within a period of a few days, whereas very few organisms become resistant to penicillin.

At this time there is considerable controversy as to whether resistant strains appear because a few organisms that were originally present were genetically resistant to the antibiotic and grew out in large numbers as the remainder were inhibited by the antibiotic; or, whether in the presence of an antibiotic, resistant mutants were allowed to survive and encouraged to proliferate. Regardless of the mechanism, it would appear that the organisms which were originally present in small numbers, or which were implanted from outside sources in small numbers, over-grow the predominant organisms because the latter are susceptible to the antibiotic, while those which replace them are not.

Hence, the problem of acquired drug resistance naturally raises the question as to whether it will ever be possible to find antimicrobial agents that will not induce resistance. Certainly, a therapeutic agent possessing specific killing properties presumably has the capacity to interfere with some part of a function which is vital to living organisms but not vital to the host. In both instances such a function or bypath must be more or less remote from the most fundamental features of life itself. This immediately implies the possibility for bypassing the function and, once this is realized, regardless of the manner of its occurrence, there will be resistance. In other words, a substance incapable of inducing resistance would seem to have little chance for possessing antimicrobial activity.

At this time, it appears that the problem of antibiotic-resistant bacteria is the greatest fear in the future with chronic infections of the respiratory tract and urinary tract, as these are usually mixed infections and are perpetuated by physiological and anatomical defects in the host. In such instances, these drugs cannot do more than provide temporary help, and hence should be reserved to prepare the patient and carry him through the period necessary for the correction of an anatomic or physiologic defect. Thus, the best way to prevent the emergence of resistant strains is by the rapid termination of the infection and the optimum correction of anatomic defects.

Furthermore, in view of the possibility of drug-resistant organisms developing, it would appear that the use of antimicrobial agents may unfavorably affect the postoperative infective rate in clean surgery. Not only is prophylaxis of doubtful efficacy, but at the same time it may mask and delay the appearance of wound infections. It would seem, therefore, that important time and expense will be saved by the restriction of antibiotics to the early treatment of established infections in the few cases in which they do follow clean operations. Along these same lines, it is well to point out that every effort be made to protect the patient from individuals harboring drug-resistant bacteria. No doubt the increasing incidence of drug-resistant staphylococci found in hospital practice is due to the fact that patients admitted with these organisms transmit the same to other patients or to hospital personnel, who, in turn, act as carriers. Certainly isolation techniques alone are not sufficient, and it seems practical that all surgeons and nurses wear masks and gloves while dressing wounds.

Superinfections

Antimicrobial therapy, in addition to eliminating the causative organisms of the infection, produces a profound alteration in the composition of the bacterial population that normally inhabits certain tissues and organs. The mechanism by which superinfection occurs during antimicrobial therapy is not clear. Normally, the body harbors many organisms which in small numbers are not pathogenic, are relatively avirulent, and cause no symptoms. When the normal ecology or microbiological balance is disturbed by antimicrobial therapy, such organisms may increase in numbers and invasiveness and give rise to infections. Occasionally, infections with microorganisms usually regarded as non-pathogenic will occur during antibiotic therapy and prove to be insensitive to the drug being employed. Such superinfections result from the dislocation of the normal bacterial flora of the sino-respiratory, gastorintestinal, and genitourinary tracts. Several mechanisms to explain these superinfections have been postulated: (a) Administration of antibiotic results in virtual elimination of susceptible organisms, thus reducing

the numbers competing for available food supply. The resistant organisms then vastly increase in numbers and overwhelm the host's resistance; (b) Normal flora supplies certain nutritional requirements of the host. Disturbance in the normal flora results in a nutritional disturbance which modifies the integrity of the mucous membrances, thereby opening a portal of invasion to organisms which normally are unable to penetrate the healthy mucosa; (c) Some antibiotics, like chlortetracycline, are suspected of directly stimulating growth and virulence of Candida albicans, with the ultimate production of candidiasis. In all probability, the mechanisms concerned involve alterations in both the host and the normal bacterial flora that follow the administration of an antibiotic. Such an opportune combination results in the appearance of a complicating infection during the course of a disease that appears to be responding favorably to chemotherapy. Hence, the importance of bacteriological studies to follow the changes in bacterial flora in various regions of the body in patients being treated for infectious diseases. For the most part, these microorganisms attack the same organs which were involved in the primary disease, but, as a rule, these organisms prove difficult to treat with the presently available drugs. It would seem, therefore, that there is a definite danger in using antimicrobial agents in diseases that are not treatable, since superinfection, which may be a very small risk in untreated infections, may thus become a serious threat. In addition, prophylactic therapy will not prevent secondary infections in many cases; thus it is doubtful whether it will reduce the incidence of superinfections in some diseases.

Toxic Reactions

In evaluating the toxicity of drugs in Man, one not only considers the immediate side effects, but also the delayed reactions which may require years of observation. Certain of these side effects are toxic, some are allergic, and others are related to the biologic activities inherent in the chemotherapeutic substances themselves.

Penicillin—The chief untoward reactions to penicillin therapy fall into three principal groups: (1) Local contact (skin, mucous membranes, and injection site); (2) Dermatological allergy (urticarial, erythematous, and eczematoid); (3) Systemic (serum sickness, anaphylactoid, cardiovascular, and renal). In addition, there have occurred certain specific phenomena associated with some particular disease being treated with penicillin, such as the Herxheimer reaction in syphilis and the development of a Loeffler's syndrome following aerosol penicillin in the treatment of some types of pulmonary disease. Furthermore, evidence is pointing towards penicillin's giving rise to a variety of disorders, including agranulocytosis, periarteritis nodosa, the production of L. E. cells in the bone marrow, and others.

At the time that penicillin was first made available for general civilian use, it was not fully understood how many of the toxic reactions described were due to impurities in the penicillin preparations, or to the drug itself. Probably the total incidence of penicillin reactions was decreased because of the increased purity of the drug and the introduction of procaine penicillin. However, the total number of reactions has increased steadily, and today penicillin heads the list of medicinal agents in frequency, diversity, and severity of the sensitivities it produces. No doubt this is a result of the fact that the drug is used promiscuously, and repeated administration of it to ever increasing numbers of people has resulted in their being conditioned to show various manifestations of hypersensitivity when exposed to subsequent penicillin therapy. Rarely does a patient experience a reaction after the first dose of penicillin, whereas the reactions become more frequent and more severe in individuals who have repeated doses. Some of the reactions occurring after the first dose are believed to be related to cross reactions with other fungi, particularly trichophytosis (athlete's foot). The more serious reactions, such as anaphylatic shock, occur most often in patients with allergic histories, especially asthma. Although any penicillin preparation and any mode of administration can cause a reaction, it appears that oral penicillin is the least likely; parenteral preparations are next in frequency, and topical penicillin the most likely to cause reactions. Reports of acute anaphylactoid reactions due to penicillin are being published with increasing frequency, with most of the severe cases following the administration of procaine penicillin. This may be due to a greater amount of sensitizing substance that is present longer or to the possible synergistic effect when two substances are injected simultaneously.

In spite of the foregoing, penicillin remains the least toxic of the currently available antimicrobial agents. Its well established therapeutic value and relatively lower cost combine to establish it as the most popular drug. Hence, every effort should be made to minimize the reactions following its administration. A history of previous penicillin toxicity should, in most cases, contraindicate the use of penicillin and manifest the desirability of administering

another antibiotic, if possible. However, many patients can tolerate penicillin, even after a previous allergic reaction, and, in such conditions as subacute bacterial endocarditis in which penicillin is strongly indicated, one may proceed with caution. When reactions do occur and are not too severe, treatment can usually be continued with the aid of anti-allergic remedies. Obviously, the more serious reactions demand discontinuance of the drug. Such reactions as anaphylactoid shock and exfoliative dermatitis demand prompt attention and treatment with supportive measures, epinephrine, anti-histaminics, and ACTH. The advisability of using a penicillin product in which an anti-histamine agent is included can be questioned, in that one is adding another potentially toxic agent. Where possible, oral penicillin should be used in preference to the parenteral route. Intramuscular injections must be given with caution, as it has been implied that some of the severe, or fatal, reactions are the result of the accidental intravenous injection of procaine penicillin. Topical applications, in the form of troches, toothpaste, aerosol, ointments, and dusting powders, are of doubtful value in most instances and should be discouraged.

Some investigators rely on skin testing as a guide in determining possible penicillin sensitivity, but as yet there seems no complete agreement as to the value and significance of skin test results, with the possible exception of the immediate whealing reaction on cutaneous or intracutaneous testing as regards the development of an anaphylactoid reaction.

Efforts to desensitize patients who have experienced penicillin reactions have been considered successful in the hands of some experienced workers. This procedure may be tried, especially when the patient's occupation, e.g., nursing, necessitates exposure to the drug, or in conditions where penicillin is urgently needed. If the sensitivity reaction has been severe, an initial dose of 2 units of aqueous penicillin G is given intramuscularly, whereas other cases are given 50 units every 3 hours the first 24 hours, 100 units every 3 hours the second 48 hours, with the dose being doubled each 24 hours until the patient can tolerate 200,000 units.

Tetracycline — Chlortetracycline, oxytetracycline, and tetracycline frequently give rise to gastrointestinal genitourinary disorders (nausea, vomiting, diarrhea, stomatitis, vaginitis, and proctitis). While these are not usually serious, they do cause considerable inconvenience and at times become quite severe. In our experience to date, chlortetracycline appears to be the most offensive in this manner. It is felt that these untoward reactions are due, at least in part, to alteration in bacterial flora leading to a vitamin B deficiency. There is evidence to support the view that chlortetracycline stimulates the growth of some types of fungi, notably Candida albicans and that these two factors combine to produce a moniliasis. When these drugs are used for periods exceeding 7 days, the patient should receive buttermilk, vitamin B complex, and B_{12} orally; if toxicity develops, the drug should be discontinued, if possible, and injections of crude liver, or B_{12} given daily. More recently, nystatin has been introduced as an agent for the prevention and management of gastrointestinal moniliasis. Nystatin is available as 500,000 unit tablets to be given three times a day and is stated to be compatible with all the present orally administered antibiotics.

Streptomycin (Dihydrostreptomycin)—In general, the severity of toxicity from both streptomycin and dihydrostreptomycin is dependent upon the duration of therapy, total dose employed, and degree of renal impairment— the principal toxic effect being damage to the eighth nerve and vestibular apparatus. While this is particularly true of streptomycin, there seems to be a lesser tendency of dihydrostreptomycin to affect the vestibular apparatus. However, damage to the auditory branch of the eighth nerve with hearing loss may occur. Since patients are able to compensate for damage to the vestibular branch, but not able to compensate for auditory damage, it is obvious that dihydrostreptomycin is less desirable, especially for long-term therapy, as is necessary in tuberculosis, than in streptomycin. Occasionally, dihydrostreptomycin is useful in patients who are allergic to streptomycin, as sometimes allergies do not develop in patients receiving this drug, whereas were they receiving streptomycin, allergies would develop. The recent practice of employing mixtures of streptomycin and dihydrostreptomycin has markedly reduced this toxic effect. Either of these compounds may give rise to a variety of less severe reactions, including the sensitivity reactions encountered with penicillin. Certainly, special precautions are indicated in patients with impaired renal function who receive either streptomycin or dihydrostreptomycin.

Chloramphenicol.—Chloramphenicol gives rise to the same toxic reactions as the tetracycline group, although one difference does exist, in that chloramphenicol exerts at times a toxic effect upon the hemopoietic system.

Erythromycin—Erythromycin appears to be of relatively low toxicity and the only undesirable effect noted in many patients treated with this drug has

been an occasional gastrointestinal upset with high dosage. It does not appear to have as adverse an effect on the ecology of the gastrointestinal flora as do the tetracyclines; some of the symptoms of the antibiogenic syndrome are thus avoided.

Polymyxin—Although polymyxin B sulfate is an agent of considerable toxicity (renal and central nervous system), its unique effectiveness in infections due to Pseudomonas aeruginosa has justified its introduction into clinical practice. This antibiotic should be employed parenterally only in hospitalized patients, since careful observation for renal damage is essential to its safe use.

Bacitracin—Since the parenteral administration of bacitracin is often followed by kidney damage, and only a small amount is absorbed when given by mouth, this drug finds its chief usefulness as a topical or oral medicament.

Neomycin—When administered systemically, neomycin may cause slight to severe deafness as well as transient renal irritation. Since this drug is not absorbed into the circulating blood stream from the gastro-intestinal tract or skin, it has found its chief usefulness in preoperative preparation for intestinal surgery and as a topical medicament for pyogenic skin infections. Although in selected cases, especially in Proteus and Pseudomonas infections, it may be administered intramuscularly for short periods of time.

Isoniazid—The administration of isoniazid may be followed by a variety of untoward reactions, the severity of which depends on the dosage, length of administration, renal function, and personality stability. Such symptoms as increased reflexes, headache, muscular twitchings, peripheral neuropathy, euphoria, excitability, constipation, vertigo, dryness of mouth, and visual difficulties, are the principal toxic side-effects encountered. Cessation, or decrease, in therapy is dependent upon the type and severity of the reaction. Recently, the use of pyridoxine hydrochloride has been shown to be effective in relieving pain in cases with peripheral neuropathy.

Sulfonamides—Despite the advent of penicillin and the other antibiotics, the sulfonamides are still being employed, especially in the treatment of urinary tract infections. In discussing the untoward reactions associated with their use, it is well to point out several factors which tend to influence their incidence and severity. The length of time that the drugs are administered and the total dose employed are probably the most important factors. Children seem to tolerate these drugs better than the aged; those with good nutrition and normal renal function better than the poorly nourished and those having kidney damage. In general, there is little qualitative difference in the antimicrobic spectrum of the various commonly employed sulfonamides. The sulfapyrimidines (sulfadiazine, sulfamerazine, and sulfamethazine) are, for the most part, employed singly or in combination in susceptible systemic infection, whereas, such compounds as sulfisoxazole (Gantrisin), sulfisomidine (Elkosin), and 2-sulfanilamido-5-methyl-1,3,4 (thiosulfil), because of their increased solubility in urine, are reserved for urinary tract infections. Likewise, because of their poor absorption from the gastrointestinal tract, phthalylsulfathiazole (sulfathaladine) and succinyl sulfathiazole (sulfasuxidine) are employed in infections of the gastrointestinal tract.

A variety of untoward reactions may follow the administration of the sulfonamides, some of which are mild, while others may be severe, or even fatal. Whereas most of these complications are seen during the administration of the drug, there are some, such as periarteritis nodosa which become manifest at a later date. The most common toxic reactions are those of nausea, vomiting, fever, dermatitis, anemia, neutropenia, agranulocytosis, psychoses, and those referable to the urinary tract. This latter group may be manifested by hematuria, oliguria, or anuria and are most frequently encountered following the sulfapyrimidines. In this connection, the belief is widely held that administration of sufficient fluid to insure a high urinary output is enough to prevent crystalluria, which is responsible for most cases of urinary toxicity. Nevertheless, high volumes of urine will not forestall precipitation of sulfapyrimidines; however, chemical and clinical studies of these compounds have demonstrated that the total amount of sulfonamide which can be held in solution in urine is substantially increased when two or more of these substances are administered simultaneously and that this is accomplished without sacrificing therapeutic activity. Thus, it is possible to lessen the hazards of urinary tract complications due to sulfonamide crystals or calculi. Hence, the rationale for the combination of sulfadiazine, sulfamerazine, and sulfamethazine. However, it is still important when using the sulfapyrimidines to maintain a urinary output of at least 1200 cc. daily.

Prophylactic Use of Antimicrobial Agents

In addition to their proven therapeutic value, the evidence is sufficiently abundant to say that these drugs are of value when employed prophylactically in certain specific instances ranging from the protec-

tion of the unborn to the prevention of complicating infections in the closing hours of life. No doubt many types of infections have been avoided by the judicious use of the antimicrobial agents, but they have also been employed illogically, which has added to their indiscriminate use.

Comment

In view of the dramatic effects which the antimicrobial agents have had upon the control of infectious diseases, most of the literature dealing with these drugs is concerned with the delineation of the triumphs produced by them. However, the dangers and harmful sequellae of their use have only recently begun to be stressed and appreciated. It is impossible at this time to estimate the true significance of the undesirable consequences of antimicrobial therapy. In view of the ability of these drugs to sensitize individuals, we may see in the future more severe reactions following their use. Likewise, more microorganisms may develop resistance to these drugs, and with the continued dislocation of the normal bacterial flora of the body by the use of these drugs more diseases due to organisms which heretofore were not harmful may result.

No doubt it is but a matter of time before medical science finds the complete answer to these unsolved problems, with their realization depending largely on the clarification of the mechanism by which these agents produce their effects. From a thorough insight into this phenomenon will come the ability to construct chemotherapeutic agents for any and every infectious disease. Furthermore, this knowledge will in turn define more clearly the antagonistic and synergistic action of these drugs, and also may endow the clinician with drugs harmless to the patient with possibly precise tissue specificity of action.

Until such time as an ideal chemotherapeutic agent is developed, the physician should limit the use of these life-saving agents to diseases in which their therapeutic effectiveness has been demonstrated and to refrain from employing them prophylactically except when the complication to be avoided is a serious one and one which occurs frequently in the absence of precautions. Furthermore, in spite of the proven therapeutic and prophylactic value of the antimicrobial agents, they are not to be used to the exclusion or neglect of other established forms of therapy. Certainly the danger signals have been hoisted and, looking into the future, we may find these antimicrobial agents will prove to be insidious purveyors of disease, in that Nature notoriously brooks interference badly and often in a subtle way defeats Man before he knows of his undoing.

Detergents No Harder Than Some Soaps.

Synthetic detergents probably do not cause any more skin eruptions than did the strong old-fashioned soaps, according to a Boston Dermatologist. Even some manufacturers at times imply in their advertising that "detergent burn" or "detergent dermatitis" has appeared with the increasing use of detergents.

However, Dr. George E. Morris thinks that hand irritations probably are not any commoner now than they were prior to the widespread use of detergents. The cause may just be recognized more frequently now.

Detergents, which are complex chemicals derived from petroleum, animal, or vegetable oils and sulfuric acid, may cause dryness and scaling, "water blisters," or secondarily infected lesions of the hands. The logical treatment is to discontinue using the detergent which caused the trouble.

He also suggested that housewives with such trouble wear white or grey cotton gloves under rubber gloves whenever they wash dishes or clothes. In addition, they should use one of the "neutral fine-fabric" detergents in cold water. Hot water aggravates the condition.

Dr. Morris' views were expressed in the July Archives of Dermatology, published by the American Medical Association.

Painful Non-Arthritic Disturbances of the Hand and Wrist

ELAM C. TOONE, JR., M.D.
JAMES KAWCHAK, M.D.
Richmond, Virginia

DUE to the common tendency to classify most skeletal pain as some type of arthritis, it is well to keep in mind that many other painful lesions affecting structures at or near joints do occur. This is particularly true since many of these conditions will respond satisfactorily to proper treatment, and not to measures or medications usually employed for joint disease. Although others exist, there are three painful syndromes of the hand and wrist which are frequently encountered, are often not diagnosed until they have been present for months or even years, and each may be treated successfully with relatively minor surgical procedures.

DeQuervain's Disease:—[1,2,3,4,5] This is a painful syndrome resulting from the thickening and stenosing of the tendon sheaths of the abductor pollicis longus and extensor pollicis brevis at the ligament of the styloid process of the wrist (Fig. 1). In severe cases the sheath may be three to four times thicker than normal, due to fibrous proliferation, and the tendons may be considerably flattened at the point of constriction. It is sometimes known as a stenosing tendovaginitis of the radial styloid. Occupations and avocations such as typewriting, knitting, fly casting, golfing, piano playing and work on grinding and buffing machines, which place these tendons under stress, predispose to the development of this condition. Women, whose wrists normally angulate to a wider degree, seem more susceptible than men. The frequent appearance of anomalies either of the tendons or their sheaths make them more liable to trauma and strain. DeQuervain's disease occurs with equal frequency in each wrist, but is rarely present bilaterally. It usually occurs during the fourth and fifth decades.

The predominant early symptom is pain over the radial styloid process which may radiate down into the thumb or up into the forearm. The discomfort is usually constant and is not aggravated by movement of the wrist except on ulnar deviation. The Finkelstein test is almost pathognomonic for the condition. This test is carried out by abducting the thumb across the palm, flexing the fingers over the thumb, and then sharply deviating the hand to the ulnar side. When positive, an excrutiating pain develops at the styloid process of the radius. Tenderness, which may be marked, is present over the radial

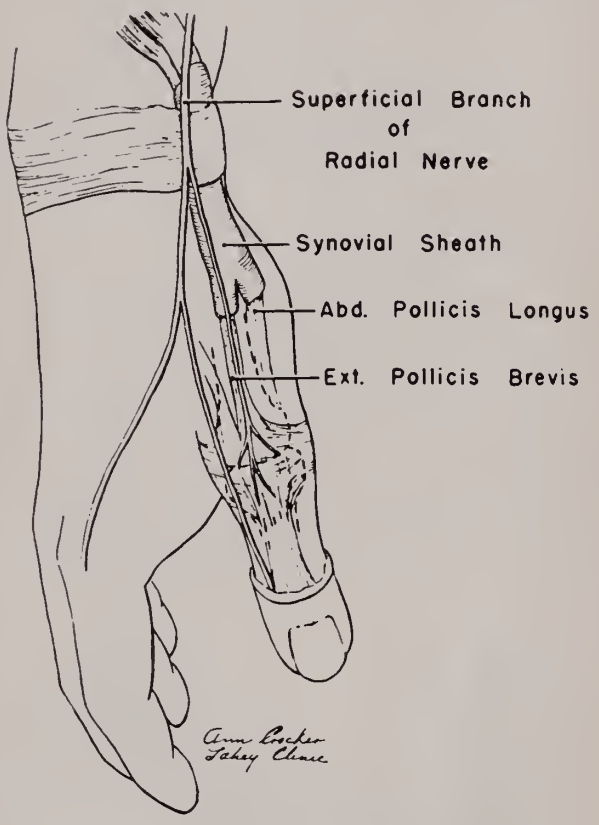


Fig. 1—Structures involved in stenosing tendovaginitis at the radial styloid process.
(Reprinted with permission of the author: Fig. 218, Haggart, G. E. and Winter, E. F.: De Quervain's Disease: Stenosing Tendovaginitis over the Radial Styloid. Surg. Clin. of N. A., 28:817-820, June, 1948)

styloid, and often there is a slight swelling present which tends to obliterate the anatomic snuff-box. Weakness may be a secondary complaint, and often there is a history of being unable to lift or hold objects because of pain and insecure grip.

Conservative treatment consisting of light roentgen therapy and/or immobilization has been advocated when the disease has been of short duration. The results, however, have been quite unpredictable.

Surgical treatment is simple and effective. The dorsal carpal ligament and the common sheath of the abductor pollicis longus and the extensor pollicis

Department of Medicine, Medical College of Virginia, and Medical Service, McGuire Veterans Hospital, Richmond, Virginia.
Received for publication May 17, 1955.

brevis are incised under local anesthesia. If the thickening is marked, the portions forming the roof of the osteofibrous canal are excised partially or completely. Rare failures are due to damage of the superficial branch of the radial nerve or a painful scar.

The Carpal-Tunnel Syndrome:—[6,7] Only during the past decade has the carpal-tunnel syndrome become widely accepted as a distinct entity. This condition results from compression of the median nerve by the transverse carpal ligament of the wrist and the contents of the carpal-tunnel (Fig. 2). The

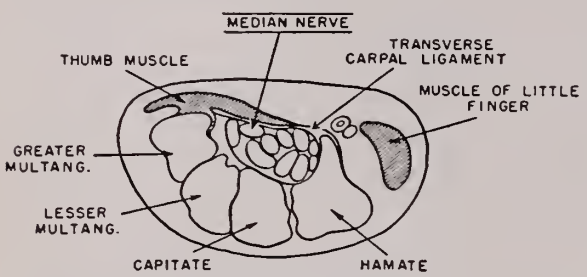


Fig. 2.—The carpal tunnel and its contents.
(Reprinted with permission of the author: Fig. 1, Phalen, G. S.: Spontaneous compression of the median nerve at the wrist; J.A.M.A., 145:1128-1133, April 14, 1951.)

patient is usually a middle aged man or woman, but the condition may occur from the second to the seventh decades of life. The dominant hand is usually affected.

Sensory symptoms constitute the earliest clinical feature, and are limited to the distribution of the median nerve (Fig. 3). Paresthesia sufficiently severe

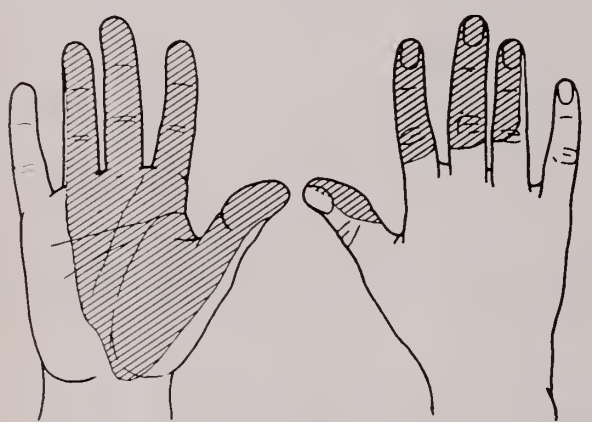


Fig. 3.—Sensory distribution of the median nerve.
(Reprinted with permission of the author: Fig. 54, Clinical Neurology, Bernard J. Alpers; F. A. Davis Co., Publishers, Philadelphia, 1947.)

to awaken the patient from sleep is characteristic; occasionally, a less intense deep aching is present over the forearm and arm. At first, numbness may be present only during paroxysms of pain, but later a permanent hypalgesia and hypesthesia may be present. Motor symptoms and signs are usually less prominent, but there may be considerable difficulty in performing simple tasks, such as sewing and writing. The objective neurologic signs may not appear for months or even years after the onset of symptoms, at which time, in addition to sensory changes, there may be a shelf-like atrophy of the thenar prominence. In many instances, symptoms may have been present for as long as two years before the diagnosis is made. If the involved wrist is held in flexion for 60 seconds, there may be rather marked accentuation of symptoms. Also, the sensory changes may be accentuated by percussion over the median nerve (Tinel's sign).

Conservative treatment consists of immobilization, and local application of heat. The results of this, however, are unpredictable and often ineffective. Surgical treatment is simple and quite effective. It consists of sectioning the transverse carpal ligament, thus decompressing the carpal tunnel. A successful operation is usually followed by prompt disappearance of pain and paresthesias, and restoration of normal motor function. The surgeon should be closely observant for the presence of cysts, ganglions and neuromas in the carpal tunnel.

The Trigger-Finger Syndrome:—[4,8,9] This condition results from a stenosing tendovaginitis of the digital flexor tendons of the thumb or lesser fingers usually at the metacarpophalangeal or the proximal interphalangeal joint (Fig. 4). It also occurs slightly

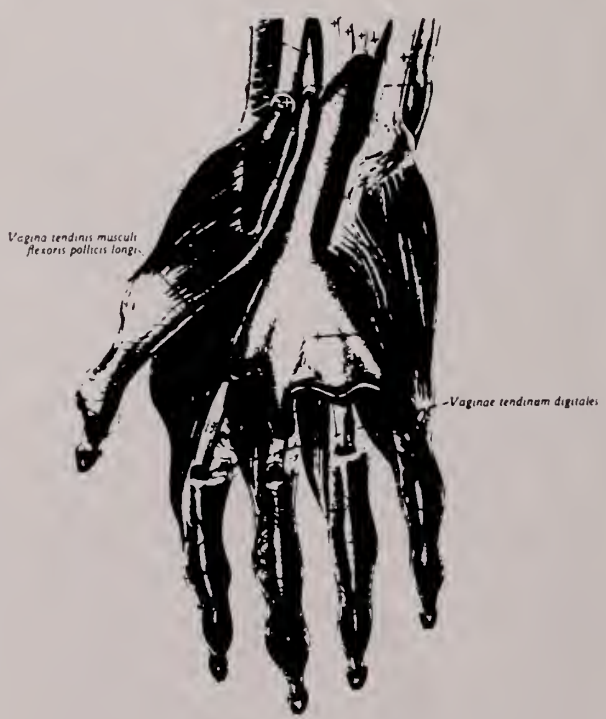


Fig. 4.—The tendons of the hand and their sheaths.
(Reprinted with permission of the publisher: Plate 464, Atlas of Human Anatomy, M. W. Woerdeman, Blakiston Co., Publishers, Philadelphia, 1950.)

more frequently in women than in men, and usually involves the dominant hand. Chronic trauma and excessive use are felt to be the cause. Involvement of the thumb has been reported often in infants.

The earliest symptoms are pain and stiffness of the involved fingers associated with some weakness of grip and pain radiating up the flexor aspect of the arm. Localized tenderness or a nodule may be present at the site of constriction. The finger becomes fixed in a flexed position as a result of the fact that the strong flexor muscles pull the tendon through the constricted tendon sheath, and the weak extensors are unable to pull it back. At times the tendon may be pulled through the constriction with a snap, often accompanied by severe pain, and occasionally not.

A significant number of these patients will improve with immobiliziation. If no improvement follows three weeks' conservative treatment, the tendon sheath constriction can be released by a simple surgical procedure.

Summary:—1. Three painful, non-arthritic, conditions of the wrist and hand have been described.

2. Two result from stenosing lesions of the tendons and their sheaths, and one from compression of the median nerve in the carpal tunnel.

3. Each may respond satisfactorily to immobilization and local treatment, but the results are often ineffective and unpredictable.

4. If conservative measures fail, each can be corrected by simple surgical procedures.

5. None of these conditions responds to medication usually employed in treating arthritic lesions.

BIBLIOGRAPHY

1. Haggart, G. E., and Winter, E. F.: De Quervain's Disease: Stenosing Tendovaginitis Over the Radial Styloid; Surg. Clin. N. A., 28: 817-820, June, 1948.
2. Lapidus, P. W., and Fenton, R.: Stenosing Tenovaginitis at the Wrist and Fingers; Arch. Surg., 64: 475-487, April, 1952.
3. Stein, A. H., Jr., Ramsey, R. H., and Key, J. A.: Stenosing Tendovaginitis at the Radial Styloid Process (De Quervain's Disease); Arch. Surg., 63: 216-228, August, 1951.
4. Lapidus, P. W.: Stenosing Tenovaginitis; Surg. Clin. N. A., 33: 1317-1347, October, 1953.
5. Lipscomb, P. R.: Stenosing Tenosynovitis at Radial Styloid Process (De Quervain's Disease); Ann. Surg., 134: 110-115, July, 1951.
6. Phalen, G. S.: Spontaneous Compression of the Median Nerve at the Wrist; J.A.M.A., 145: 1128-1133, April, 1951.
7. Brain, W. R., Wright, A. D., and Wilkinson, M.: Spontaneous Compression of Both Median Nerves in the Carpal Tunnel; Six Cases Treated Surgically; Lancet, 1: 277-282, March, 1947.
8. Lipscomb, P. R.: Chronic Nonspecific Tenosynovitis and Peritendinitis; Surg. Clin. N. A., 24: 780-797, August, 1944.
9. Engel, D.: Trigger Finger Produced by Excessive Heat; Surgery, 26: 659-664, October, 1949.

1200 East Broad Street

Relieves Skin Diseases.

A derivative of Rauwolfia serpentina, the old "snakeroot remedy" from India, has been used successfully by two Michigan physicians to relieve "itchy" skin diseases, originating wholly or partly in the mind.

Thirty-six patients were treated with alseroxylon (Rauwiloid) for various chronic skin diseases either caused by or influenced by tension or psychological factors. Alseroxylon not only relieved the patients' itching, but also had a calming effect on them. Relief from itching and corresponding improvement of the skin condition varied from 50 to 100 per cent in the patients. Only one showed no improvement.

All the patients experienced definite but varying degrees of relaxation, tranquilization and mild sedation. Most of the patients overlooked the feelings of sleepiness and mild fatigue in favor of the more welcome and prominent effects of lessened tension and a sense of well-being, the doctors said. Insomnia, which 10 patients had, was completely relieved in seven and lessened in three.

Because relief of itching may be related to the tranquilizing action of alseroxylon on the central nervous system, the drug is of "decided value" in treating skin diseases in which a psychological factor is prominent, the physicians concluded.

Rauwolfia serpentina has been used for hypertension and various mental illnesses.

Making the report in the July Archives of Dermatology, published by the American Medical Association, were Dr. Richard J. Ferrara, Detroit, and Dr. Hermann Pinkus, Monroe, Mich.

Premature Separation of the Normally Implanted Placenta

W. E. STUDDIFORD, M.D.
WAYNE H. DECKER, M.D.
New York, New York

Introduction

ONE may find reference to profuse and sometimes fatal hemorrhage, often referred to as "flooding", as a complication of the later months of pregnancy in the earliest of our obstetrical sources. Its significance and mode of production remained largely obscure until Rigby[1] in 1775 clearly differentiated hemorrhage due to placenta previa from that due to separation of the normally implanted placenta, and brought out the very different problems which these complications present. Because separation of the normally implanted placenta occurred from obscure reasons while that occurring in placenta previa was inevitable with retraction and dilatation of the cervix, he called the condition produced by the former lesion accidental hemorrhage. This term has been largely discarded in this country since it has been thought to over-emphasize a traumatic etiology and has been replaced by the phrase utilized in this presentation or by the shorter abruptio placenta and ablatio placenta, suggested by DeLee and Holmes respectively. Both of the latter terms, however, imply complete separation which is only encountered in the minority of cases.

Incidence

The incidence of separation of the placenta varies greatly in different hospital reports and is quoted as ranging from one in eighty-five to one in two hundred and fifty. It is to be suspected that this wide disparity of incidence arises from a failure to include in many reports mild cases of partial separation and also cases occurring before the 28th week of pregnancy. A careful survey of the material on the Bellevue Obstetrical Service over a ten year period by Studdiford and Decker[2] has shown an incidence of one in eighty-three. At least 10% of these occurred before the twenty-eighth week and a few were included in which inspection of the placenta showed clear-cut evidence of a minor separation which was not accompanied by clinical hemorrhage. Both of these varieties of premature separation are ignored in most statistical surveys and account in part for the frequency with which this lesion is reported from the Bellevue Service.

From the Obstetrical and Gynecological Service (Third Surgical Division), Bellevue Hospital and the Department of Obstetrics and Gynecology, New York University College of Medicine.

Read before the Annual Spring Clinic of the Norfolk County Medical Society on March 30, 1955.
Received for publication April 15, 1955.

Etiology

Preliminary to a consideration of the etiology of premature separation, the relationships of the normally implanted placenta may be reviewed with profit. It is most commonly attached to the upper part of the corpus on the anterior or posterior wall by a thin layer of decidua from which incomplete partitions arise between the cotyledons and through which pass many afferent and efferent vessels of fairly larger caliber. By means of these vessels large quantities of maternal blood are received in and removed from the placental blood space. Their walls are thin and often reduced to an endothelial lining in the decidual area. The importance that Spanner[3] attributed to the marginal sinus as the main source of venous drainage of the placenta has been disproved by more recent investigations.[4] The pressure in this circulatory system is low but because of its nature it must readily reflect alterations in pressure occurring in both the arterial and venous systemic circulations of the mother. Additional factors in maintaining the placenta at its point of attachment may well be the normal tonus of the uterine muscle and intra-amniotic pressure.

In the attempt to discover a specific lesion to account for premature separation, studies have been conducted by Williams,[5] McKelvey,[6] and Hertig[7] on the uterine and decidual vessels. They have described degenerative changes not only in these vessels but in the supporting decidua which surrounds them. Since similar changes may also be found in specimens in which premature separation has not occurred, their importance has been discounted. Nevertheless, the presence of such lesions is clear-cut evidence that the decidua of the placental site represents an area of vascular weakness.

Trauma from violent external sources may occasionally be an antecedent of separation. We have seen such cases following attempts at external version, falls and automobile accidents but such a background is uncommonly present. However, one cannot dismiss trauma as a factor without considering the muscular activity of the uterus which usually neatly

severs the decidual attachment of the placenta in the third stage of labor with the first contraction after the expulsion of the fetus. That uterine activity itself may be a provoking cause of injury to these weak decidual vessels becomes a distinct possibility when one considers that about 40% of separations occur at term or during labor. In a smaller group the separation may not only be related to labor but to a sudden reduction in the size of the uterine contents, i.e., following the delivery of the first of twins and after rupture or tapping of the amniotic sac in polyhydramnios. Bieber[8] has found that an increased number of separations occur at the end of each lunar month of pregnancy during the last trimester, a period when uterine activity becomes increased. Recalling these relationships one cannot escape the suspicion that, while external trauma is rarely a factor, intrinsic trauma due to uterine activity may possibly provoke this lesion.

One of the important fields of modern physiologic research has been that of hemodynamics. Our knowledge of such intravascular changes in the pregnant uterus is limited because of its inaccessibility. We do know that femoral venous pressures[9] are raised during pregnancy because of the pressure of the pregnant uterus upon the vena cava. It is not unreasonable to suspect that such increases of pressures may well be transmitted backwards to the placental blood space because of the nature of its circulation. Morse,[10] in 1918, was able to produce premature separation in experimental animals by ligating uterine vessels or producing torsion of the uterine horn. He postulated that venous obstruction due to torsion might be the causative factor in humans. Because sufficient torsion to cause this accident was rarely noted, his observation was forgotten. Recently Howard and Goodson[11] have uniformly produced this lesion in pregnant dogs by ligation of the vena cava and the left renal vein, and, collaborating with Mengert, have produced premature separation of the placenta in women at term during cesarean section by digital compression of the vena cava for a few minutes. These observations are ample evidence that elevations of venous pressure produced by obstruction can produce an explosion in the weak-walled vessels of the decidua basalis. It is indeed fortunate that most pregnancies are not exposed to such sudden elevations of venous pressure; otherwise, the human race would rapidly vanish from this earth. On the arterial side, hemodynamic effects may well explain the increased incidence of premature separation found by all observers among patients with toxemia of pregnancy and other hypertensive complications. Parenthetically, it may be stated that we[2] have found little or no evidence in our clinical material that premature separation is always a manifestation of toxemia. Wellen,[12] in a study of toxemia and hypertensive complications of pregnancy on the Bellevue service, states that the frequency is not increased in mild varieties of these complications. It becomes about five times as frequent in the presence of severe hypertension, whether of the toxemic or essential variety.

It is commonly stated that the etiology of premature separation is unknown. However, from the previous remarks it would seem likely that the area of the decidua basalis represents a zone of vascular weakness; that the vessels in this area may be injured, infrequently, by external trauma, quite commonly by the intrinsic trauma of uterine muscular activity; finally, that alteration in normal hemodynamics of the placental circulation may well play a part, particularly in the hypertensive states of pregnancy. Such an etiological hypothesis lends little hope from a preventive or prophylactic point of view.

Pathology

Rupture of a decidual vessel results in the formation of a hematoma between the uterine muscle and the placenta. Almost always this progressively increases in size, enlarging along the path of least resistance and frequently compressing the overlying placenta. In a few instances we have seen examples of a small hematoma in which progress has been arrested by clot formation. Such examples can only be discovered by careful examination of the placenta after delivery. For a number of years we have been convinced that the severity of the results of such an accident depend on the location of the ruptured vessel. This opinion is based on the fact that major separations take place rapidly with death of the fetus. It is most unusual on the other hand to see a partial separation gradually become complete over a period of many hours. It would seem likely, therefore, that total separation resulted from the rupture of a decidual vessel beneath a central cotyledon. The resultant hematoma, of necessity, must rapidly strip the surrounding placenta away from its attachments and disrupt its blood supply, adding in this process to the source of hemorrhage. It is in this variety of separation that large quantities of blood may accumulate in the uterine cavity to produce concealed hemorrhage. On the other hand, rupture of a vessel beneath a marginal cotyledon need not produce such dire effects since the hematoma then dissects between the membranes and the

decidua, a plane which is relatively avascular and more easily separated from the uterine wall than the placenta itself. The degree of separation is largely, then, one of chance. Concealed bleeding takes place only shortly after the vascular accident and it may lead to difficulty in early diagnosis. Ultimately the vast majority of there cases bleed externally and no[2] instance of totally concealed bleeding was encountered among the 305 cases reviewed at Bellevue Hospital except in the few cases previously mentioned in which spontaneous control of hemorrhage had occurred.

In addition to the placental findings, changes are often found in the uterus, most frequently in major separations. These were originally noted by Couvelaire in 1912.[13] Grossly, the uterus has a purplish, coppery color which is most marked over the area to which the placenta is attached, but sometimes involving the entire organ. In extreme cases the serosa of the organ shows oozing cracks and fissures and similar discoloration may involve the peritoneum of the broad ligaments, in which thrombosed veins occasionally may be palpated. Sections of the uterine wall in these areas show the muscle to be discolored with hemorrhage. Blood may be seen escaping from the abdominal ostia of the tubes. Microscopic examination of the uterine wall shows an extensive infiltration of red cells, most marked in the connective tissue between the muscle bundles. This is caused by an extensive entrance of red cells into the uterine lymphatics, as well as pressure infiltration from the area of the hematoma. How often this uterine involvement is present cannot be stated since it usually is noted at cesarean section, during laparotomy for postpartum hemorrhage, and at autopsy. In the 305 cases reviewed at Bellevue, this type of uterus was encountered ten times among thirty-seven cesarean sections, twice at laparotomy for postpartum hemorrhage, and once at autopsy. In all but one of the cases noted at cesarean the uterus was functionally normal and was not removed. This infiltrative lesion of the myometrium can be so extensive as to impair uterine contractility, thus destroying one of the mechanisms by which postpartum hemorrhage is controlled. For this reason hysterectomy was carried out on three occasions, the other two being performed in the postpartum period following vaginal delivery.

Finally, bilateral cortical necrosis of the kidneys and pituitary necrosis are occasional findings in fatal cases. These rare complications were absent from our series.

Alterations in Physiology

In addition to the pathological changes, at least two derangements of normal physiology have been noted in connection with premature separation of the placenta, one of them helpful and reasonably common, the other, fortunately, rare.

The first is the development of hypertonus of the uterine musculature which may reach such a degree that intermittent expulsive contractions may become undetectable to palpation. This is most apt to happen to this marked extent in complete separations and accounts for the hard uterus, so aptly described as ligneous by Williams. It is least detectable manually in the lesser degrees of separation but may well be present as the rapid and efficient labors of many of these patients testify. Alvarez and Caldereyo Barcia[14] have done some most interesting investigations, measuring myometrial tonus and intra-amniotic pressures by means of micro-balloons and catheters attached to an electromanometer, and find that uterine tonus is increased three to four times above that seen in normal labor (10 mm. Hg.) and that superimposed on this hypertonic state can be recorded contractions similar to that seen in normal labor. They regard this manifestation as a possible cause of premature separation since it must alter the flow of blood in both afferent and efferent vessels in the uterine wall. However, since this phenomenon is clinically obvious only after the occurrence of extensive separations, it seems more probable that the hypertonus occurs in response to the sudden distention of the contractile portion of the uterus caused by the rapid accumulation of blood in the subplacental hematoma. In all likelihood it is secondary to the separation and not a provoking cause.

The other physiologic disturbance consists in the development of a defect in the clotting mechanism. While similar defects have been observed in other obstetrical complications, and, occasionally, during major surgical procedures, they occur most frequently during major placental separations. The tendency for some of these cases to develop uncontrollable bleeding with failure of clot formation, not only from the genital tract but from extragenital areas, was first noted by DeLee in 1901.[15] Others have called attention to this phenomenon, but Dieckmann[16] in 1936 was the first to note the marked decrease in blood fibrinogen. Wiener, Reid and Robey[17] have carefully investigated this defect. They postulate the extensive entrance of thromboplastin derived from the damaged placenta and decidua into the maternal circulation and, as a consequence, a widespread intravascular deposition of fibrin with a

resultant disappearance or marked lowering of fibrinogen in the blood. This coagulation defect has been termed afibrinogenemia. It develops after the occurrence of extensive separation of the placenta and disappears quite rapidly following delivery, providing the defect is controlled. Reid further believes that the development of this defect is slowed or arrested by a reduction of intrauterine pressure accomplished by rupture of the membranes. The detection of this defect is quite easily accomplished by the observation of clot formation in a blood sample collected in a large caliber tube and the subsequent incubation of this tube at 37° for one hour. The failure of clot formation or the formation of an unstable jelly clot can be considered evidence of deficient fibrinogen in the mother's blood. In the presence of such results an estimation of blood fibrinogen levels usually will reveal 100 to 150 mg. per 100 c.c., or less.

The correction of this defect often requires as much as 8 to 10 grams of fibrinogen. Whole blood by direct transfusion, preferable to citrated blood, may be helpful but contains far too little fibrinogen to correct this deficiency in most cases when used alone, even in large quantities. Fortunately clinical evidence of this defect appears rarely. Among 96 cases of major separation occurring on the Bellevue Service, only one patient has been found whose course clearly suggests its presence. None have been encountered since the mechanism of this condition has been made clearer. In spite of this rarity the possibility of the development of such a coagulation defect in these cases must be kept in mind constantly.

Clinical Course and Diagnosis

The clinical course of patients developing a separation of the placenta is variable. The picture is most characteristic in major separations in which more than half the placenta is detached, resulting in death of the fetus. The onset is usually marked by the sudden development of severe continuous abdominal pain which may be present for some time prior to the appearance of external bleeding from the vagina. Sooner or later this appears, usually in considerable quantity. When examined the patient appears in acute distress, exhibits pallor, an elevated pulse, hypotension, and in some instances the fully developed picture of shock. On examination of the abdomen the uterus is acutely tender and tensely contracted, the fetus cannot be outlined, and the fetal heart is usually absent. In addition, the uterus may be found to be abnormally enlarged or to enlarge under observation. Evidence of a coagulation defect may be noted for the first time by persistent bleeding from needle punctures or by failure of the escaping blood to clot. In these cases, the process reaches a climax in a very short time. Because of the severity of these symptoms, such patients are usually rushed to the hospital, yet, in 88%[2] of 86 major separations which began outside the hospital, the fetal heart was absent on admission; in the remainder it disappeared very shortly after admission. Of ten patients developing severe separations while under observation on the ward, the fetal heart disappeared in eight within one hour. The diagnosis in such cases is not difficult, the picture being quite different from that of placenta previa or rupture of the uterus.

The more common minor or partial separations, particularly those involving a small peripheral area of the placenta, often fail to show this easily recognized syndrome. Here as much as one-third of the placenta may be thrown out of function, yet the remainder proves sufficient to sustain the fetus. Mild abdominal discomfort or pain which may be localized to a small area may precede the sudden escape of a considerable quantity of blood from the uterus. The patient does not appear in acute distress and blood pressure is not often altered. Abdominal examination reveals a uterus with no obvious increase in tone or at most a localized area of hypertonus and tenderness. The fetal heart is usually heard without difficulty and does not seem disturbed. The fetus can be outlined without difficulty, the presenting part usually dipping into the pelvic brim without evidence of displacement. Following the initial gush of blood, moderate to heavy vaginal bleeding persists. Coagulation defects are practically never seen. A study of 209 partial separations at Bellevue Hospital showed only four in which alteration of the fetal heart during a period of observation suggested a progressive separation of the placenta.[2] We have termed these the intermediate variety. Further reference to these cases will be made in the discussion of management. Many of these cases, because of the absence symptoms and signs, suggest placenta previa. While x-ray investigation may be of value in making the differentiation, we have found that careful examination in the operating room is the most certain means of determining the exact cause of hemorrhage.

Regardless of the degree of separation and the stage of pregnancy, these accidents usually result, within a short time, in the onset of labor; should they occur during labor, the expulsive process is commonly accelerated. In this tendency premature

separation differs greatly from placenta previa. This trend often serves to initiate the differential diagnosis for only occasionally can these cases be carried for long periods on conservative management once separation has occurred. In placenta previa, on the other hand, the initial hemorrhage usually does not interfere with the course of pregnancy; labor, when it does occur, is commonly inefficient for mechanical reasons attributable to displacement of the presenting part.

The maternal mortality is largely confined to the group showing major separations. Minor separations present little or no maternal risk. Among 305[2] cases reviewed at Bellevue Hospital, two deaths occurred among 96 major separations, one of which showed evidence of a clotting defect and a normal puerperal uterus at autopsy, and therefore must be regarded as preventable in light of present knowledge. None occurred among 209 cases of minor separation. The fetal loss is enormous. Among the 96 major separations the fetal loss was 100%. Among 209

TABLE I

305 PREMATURE SEPARATIONS OF THE NORMALLY IMPLANTED PLACENTA

OBSTETRICAL SERVICE—BELLEVUE HOSPITAL

A.	Major Separations	96.	Stillbirths	100%
B.	Minor Separations	205		
	Intermediate Separations	4		
		209		

Living Infants Delivered in All But 17 of These Cases

Neonatal Deaths	42	30 Immature 12 Premature 0 Term
Fœtal and Neonatal Mortality		30 (-)%

minor and intermediate separations, the fetal mortality amounted to 30%. The fetal mortality for the entire group amounted to 51.5%. This is higher than is quoted in many reports but it must be remembered that cases occurring prior to the 28th week of pregnancy have been excluded in many of them.

MANAGEMENT

The management of the woman presenting evidence of a major separation differs in some degree from that of the woman with a minor or partial separation, particularly if it has occurred well before term with minimal evidence of placental disturbance. In the former, the diagnosis can usually be readily made by the general clinical picture. Since the fetus is usually dead or dies shortly after the initial examination, therapy can be directed entirely in the mother's interest. Immediate steps should be taken to replace blood loss which is often difficult to estimate because the amount of external bleeding gives no clue as to the quantity which has been shed within the uterus. An initial transfusion of 1000 c.c., utilizing citrated bank blood, is not too much for these cases and more may be required. At the same time tests for fibrin deficiency should be carried out and repeated every hour until delivery. Reid[17] has suggested the simple clot observation test, while Bonsnes[18] has devised a simple test for critical fibrinogen levels, utilizing human thrombin. The quantitative estimate of blood fibrinogen is an involved and time consuming procedure but should be carried out if these simple tests suggest a deficiency. Should evidence of a clotting defect be present, further transfusion should be given by a direct method and 1-2 grams of fibrinogen administered. Also it is wise in such a patient to perform a cut-down[17-19] on a saphenous vein and to insert a polyethylene catheter in order to facilitate the almost constant parenteral therapy that some of them demand.

Blood loss having been combated and steps having been taken to determine the efficiency of the clotting mechanism, the patient is taken to the operating room and prepared for examination. Here the question of placenta previa may be finally eliminated, the character of the cervix determined and the membranes ruptured. The latter procedure reduces intra-uterine pressure, appears to lessen bleeding, often initiates labor and seems to have a favorable effect on afibrinogenemia. If labor has not been established within a short time, the use of pituitrin infusion has been found to be valuable for this purpose. In the presence of a closed, thick cervix, paravertebral sympathetic block[20] has been used to hasten its retraction and dilatation. Most of these patients develop extremely rapid and efficient labors even in the presence of a cervix which appeared most unfavorable on the initial examination. Sometimes the intermittent expulsive contractions cannot be detected against the marked hypertonus of the uterine muscle so that the rapid progress comes as a surprise. Further transfusions may be indicated during labor, as well as additional units of fibrinogen in the presence of a clotting defect. At delivery, the stillborn fetus, the placenta and a retroplacental accumulation of blood are commonly expelled simultaneously. Following this greatly abbreviated third stage, postpartum hemorrhage is still a threat, which a study of our cases revealed to be related to the duration of labor. Eighty-two per cent of our patients delivered within twelve hours and only 4% had post-

partum hemorrhages; 18% were in labor over 12 hours and among these 20% had significant hemorrhages in this period.

In addition to the common methods of combating postpartum hemorrhage, we have not hesitated to pack these patients and, contrary to the opinion of others,[21] believe it to be a valuable method of control. Since 1948[22] we have used oxidized cellulose for this purpose with excellent results. Twice we have had to perform postpartum hysterectomies because this measure failed to control bleeding but both of them occurred prior to 1948 when plain gauze was being used. In neither case was there clinical evidence of a clotting defect; both patients had Couvelaire uteri. Needless to say further transfusion may be required in this period, while the administration of blood by direct method and of fibrinogen may be necessary in patients with clotting defects for as long as twenty-four hours postpartum. This is[17] dependent on the reappearance of normal fibrinogen levels in the mother's blood, an event which takes place fairly rapidly following the delivery of fetus and placenta.

Minor separations present little or no threat to the mother providing blood replacement is carried out. In many instances, the blood loss is not great enough to make this necessary. Accumulation of large amounts of blood within the uterus is uncommon and clotting[17] defects do not occur. The chief question which arises is that of the effect of this lesion on the fetus. Among[2] 209 cases of partial separation reviewed at Bellevue Hospital, only four suggested by irregularity and slowing of the fetal heart that the separation was progressive and was reaching a critical stage. These we termed the intermediate type of separation to distinguish them from the major and minor variety. The remainder showed the fetal heart rate to be uninfluenced by the separation. On this evidence, it was concluded that minor separations rarely progressed to a major form. Therefore, when such cases are seen close to term in labor, the therapy has been in the main that advocated in major separations, i.e., rupture of the membranes; induction of or stimulation of labor by pituitrin infusion, providing no contra-indication is present; intervention in the second stage to shorten the period of fetal risk; careful conduct of the third stage with appropriate treatment of postpartum hemorrhage should it occur.

In quite a group of these patients minor separation occurs long before term. In the absence of signs and symptoms other than vaginal bleeding, they are often confused with placenta previa. If blood loss is not too extensive, these patients have been treated by bed rest and blood replacement. Premature labor almost always develops after a few days, at which time pelvic examination in the operating room reveals the exact diagnosis. Only rarely does such conservative therapy result in a gain in the chance of fetal survival.

Our group of 205 cases[2] of minor separation together with four cases of intermediate type showed a large fetal and neonatal mortality amounting to

Table II

17 Stillbirths Occurring Among 205 Minor Separations and 4 Intermediate Separations

2	Immature Infants
2	Fœtal Hydrops
1	Multiple Major Anomalies
1	Mother Elderly Uncontrolled Diabetic
1	Congenital Tuberculosis
3	Complicated Labor
	(a) Prolapse of cord
	(b) Difficult breech extraction
	(c) Impacted transverse lie
3	Fœtal Death Preceded Separation
13	
3	Fetus Alive Just Before Delivery. Amount of Separation Seemed Inadequate to Explain Death.
1	Fetus Died During Cesarean Section; About ½ Placenta Separated
17	

30%. However, only 17 of these patients failed to deliver a living child; of the 17, 13 had additional complications which were major factors in the occurrence of a stillbirth; in three the fetus was alive until just before birth but the placenta showed only a minor degree of detachment; in only one the placental detachment was considered the main factor in the loss. There were 42 neonatal deaths, 30 in immature infants and 12 in prematures. No term infants died in the neonatal period. Thus the large fetal and neonatal loss was due to a great extent, to additional complications, and to the interruption of pregnancy prior to term rather than to the partial detachment of the placenta *per se*.

What is the place of cesarean section in this therapy? It would seem certain from what has been said that abdominal delivery, following conservative therapy in an effort to carry the mother close to term, can never accomplish the marked improvement of fetal and maternal results in premature separation that it has in placenta previa[23]. It was utilized[2] 37 times during our group of 305 cases, an incidence

of 12%. In 13 patients, however, there were additional indications, such as uterine scar, abnormal presentation, prolapsed cord, uncontrolled toxemia, etc., which made abdominal delivery urgent. This would place the incidence of cesarean section for premature separation *per se* at 7.8%. Three of the four cases of partial separation who developed evidence of fetal distress while under observation were delivered by cesarean section. Two of these infants died in the neonatal period, one was a stillbirth. The fourth case delivered vaginally, the infant dying in the neonatal period. In all four instances, these infants were very premature. It was concluded that cesarean section could be restricted to cases of separation whose labor proved ineffective after a period of observation and stimulation; to patients with excessive uncontrollable hemorrhage in the absence of a clotting defect; and to cases in whom strong unrelated obstetrical indications were present. We will continue to do sections when fetal distress develops during the period of observation, but have little hope that it will improve the fetal and neonatal mortality to any marked degree.

Summary

Premature separation of the normally implanted placenta is the commonest cause of major blood loss prior to delivery. Its occurrence is probably influenced by many factors, the principal one of which appears to be the character of the decidual zone of the placental attachment. On this area traumatic and hemodynamic influences can act to produce vascular rupture and consequent placental detachment because of hematoma formation. The degree of detachment, partial or total, minor or major, depends on the central or peripheral location of the initial vascular rupture. Hemorrhage infiltration of the uterus is commonly associated with such separations, but usually does not disturb the contractile function of the organ. When such disturbance does take place, difficulty in controlling postpartum hemorrhage can sometimes be expected. Major separations frequently result in the development of marked hypertonus of the uterine muscle, and rarely in a clotting defect, afibrinogenemia. The syndrome of major separations is usually obvious and characteristic; that of minor separations less definite, so that they often clinically suggest placenta previa. When such separations occur well before term, almost always a strong efficient premature labor occurs within a few days; when they occur at term, a strong and efficient labor is easily induced; when they occur during labor, the process is often accelerated. There is little evidence that minor separations often progress to the major variety during long periods of observation. The fetal mortality in major separations can rarely be influenced because of the rapidity of their development. The fetal and neonatal mortality in the minor variety appears to be related largely to factors other than the separation *per se*. The treatment of both varieties should be conservative, restricting the use of cesarean section to a small minority in which labor has proved ineffective after several hours of trial; to patients hemorrhaging to an uncontrollable degree without clotting defects; to those in which the fetal heart shows changes suggesting that the separation has reached a critical point, and to those in which strong unrelated obstetrical indications are present. The importance of transfusion, often multiple; of careful studies of the blood to detect clotting defects and their treatment with fibrinogen; and the active management of postpartum hemorrhage has been emphasized. Every effort should be made to distinguish such cases from placenta previa because rational management of the two conditions may be conducted on widely different lines.

Bibliography

1. Thoms, H.: Classical Contribution to Obstetrics & Gynecology—Thoms, p. 77; 1935.
2. Studdiford, W. E., and Decker, W.: Obst. and Gyn., V.1: 418; 1953.
3. Spanner, R.: Zt. sehr. f. Anat. u. Entwichl., 105: 163, 1935.
4. Ramsey, E. M.: Am. Journ. Obst. and Gyn., 67: 1, 1954.
5. Williams, J. W.: S. G. & O. 21: 541, 1915.
6. McKelvie, J. L.: Amer. J. Obst .and Gyn., 38: 815, 1939.
7. Hertig, A. T.: Surg. Clin. of N.A., 4: 602, 1945.
8. Bieber, G. F.: Amer. Journ. of Obst. & Gyn., 65: 257, 1953.
9. McLennan, C. E.: Amer. Journ. Obst. & Gyn., 45: 568, 1943.
10. Morse, A. H.: Surg. Gyn. Obst., 26: 133, 1918.
11. Howard, B. K., Goodson, J. K. & Mengert, W. F.: Amer. Journ. Obst. & Gyn., 66: 1104, 1953.
12. Wellen, I.: Amer. Journ. Obst. & Gyn., 16: 36, 1953.
13. Couvelaire, A.: Ann. de Gynec. et d'Obst.
14. Caldereyo, Barcia R., and Alvarez, H.: Journ. of Obst. & Gynec. (Brit. Emp.), 59: 646, 1952.
15. DeLee, J. B.: Am. J. Obst., 44: 785, 1931.
16. Dieckmann, W.: Amer. Journ. Obst. & Gyn., 31: 734, 1936.
17. Wiener, A. E., Reid, D. E., & Robey, C. C.: Amer. J. Obst. & Gyn., 66: 475, 1.
18. Bonsnes, R. W.: In press.
19. Heaton, S. C., Solomon, C., & Happel, E.: In press.
20. Reich, A. M.: Am. J. Obst. & Gynec., 61: 1263, 1953.
21. Cosgrove, S. A.: Southern M. J., 29: 1219, 1936.
22. Smith, W. C.: N. Y. State J. Med., 49: 2187, 1949.
23. Reich, A. M.: In press.

477 First Avenue.

The Cross and the Caduceus in this Atomic Age

REV. JOHN G. LAMBRIDES
Kecoughtan, Virginia

Text: "For we are laborers together with God." 1 Cor. 3:19

AN INDIAN youth standing before the fire on a hilltop, ardently conveyed his message of love to his beloved across the wide plains by smoke signals. With the use of his blanket and flimsy columns of smoke, he skilfully declared his undying love to the fair maiden across the great divide. While he was energetically pursuing his amorous assertions, a great atomic blast was discharged in the distant flats. The skies became radiant and the dark colorful clouds mushroomed toward the heavens in majestic splendor. The youth was stunned by what he saw, raised his eyes in utter astonishment, gasped, "O dear, if I could only say it like that!"

You have bestowed upon me a high honor in asking me to bring the concluding message of a spiritual note before the annual convention of the Virginia Academy of General Practice—to this group of men and women who have dedicated themselves to the healing of humanity. We are living and serving in one of the most glorious periods of this world's history. This is the atomic age of conquest and confusion. Great is the burden which rests upon shoulders of the men of the Cross and the Caduceus. Like the Indian lover, "O, I wish I could say it like that!"

No wonder that the half* of all the more than a million, five hundred thousand hospital beds in the United States are occupied by neuro-psychiatric patients. The one hundred and sixty million Americans are constantly reminded through the medium of television, radio, newspaper and public address of the deadliness of atomic and hydrogen bombs, bacteriological and chemical warfare, threats that hang as black clouds to rain terror upon the earth. Society is further warned that she may be the victim of cancer, heart attack or one of the two hundred or more other disorders. An informed public is not always an enlightened public, so the international unrest adds to our anxieties. Unless there is a spiritual revival, the four fears may overshadow our four freedoms. We are in the kingdom for such a time as this. It is an age of wonder, and a wonderful age, and yet it is an age of knowledge without understanding, religion without refuge, medicine without health.

JOHN G. LAMBRIDES, *Chaplain, VA, Hospital.*

The great American statesman, General Omar Bradley described our era thus: "With the monstrous weapon man already has, humanity is in danger of being trapped in this world by its moral adolescents. Our knowledge of science has clearly outstripped our capacity to control it. We have too many men of science; too few men of God. We have grasped the mystery of the atom and rejected the Sermon on the Mount. Man is stumbling blindly through a spiritual darkness while toying with the precarious secrets of life and death. The world has achieved brilliance without wisdom, power without conscience. Ours is a world of nuclear giants and ethical infants. We know more about war than we know about peace, more about killing than we know about living.

"This is our twentieth century's claim to distinction and to progress."

In the Old Testament in Jeremiah 8:22, the Prophet asks: "Is there no balm in Gilead; is there no physician there? Why then is not the health of the daughter of my people recovered?"

Ancient Israel was a nation which has been blessed with the favors of God, but prosperity brought about her downfall. The lesser ills of the nation had found their remedy, but the nation seemed a helpless prey to the greater ills.

All mankind is incurably religious. As the flower is drawn toward the light facing the unseen sun, so the soul and spirit of man is drawn towards the Eternal God.

1. Faith—The Balm of Gilead

The staggering statistics, medical, mental, social, international and economic, have made our leaders conscious that the nation is spiritually on the seriously ill list. Arnold Toynbee states that today's world conflict is basically spiritual. The current trend is to provide comprehensive care for the total recovery of patients. The physical, mental and spiritual state of our society are interrelated and should be considered on the whole. The scriptural admonition, "Be ye

*American Journal of Psychotherapy, Ap., 1955, p. 312.

Delivered before the Virginia Academy of General Practice, Old Point Comfort, May 15, 1955.
Received for publication May 27, 1955.

holy", is synonymous with the idea of the total care of patient.

The Cross and the Caduceus have much in common. The artist, in designing the symbol of medicine, borrowed the staff of Mercury, correlating it with the rod of Moses and the brazen serpent. In His day, Jesus said, "As Moses lifted up the serpent in the wilderness, even so must the Son of Man be lifted up: That whosoever believeth in Him should not perish but have everlasting life." (John 3:14, 15). The Cross of Christ has become the symbol of brotherhood and service. The historical Christ is the Great Saviour, The Great Physician and The Great Teacher. The church, the hospital and the school are products of His grace. Jesus said, "I am the way, the truth and the life: no man cometh unto the Father but by Me." (John 14:6). The Reverend Russell H. Conwell, former pastor of the Temple Church in Philadelphia, founded the Temple University and the Temple University Hospital as the Good Samaritan Hospital. These ministrations were the arms of the church. The physician and the clergyman are interested in humanity and personality. To them men are more important than money or machinery.

The Saviour said, "Man shall not live by bread alone, but by every word that proceedeth from the mouth of God." (Matt. 4:4), Bread alone makes of man a vegetation. To the span of life must be added the hope of eternal life. Under the stress and strain of this atomic age to what source will a man turn if he does not have faith in God? Our world is a whirling world and modern man is staggering toward self destruction as he dizzily faces the blinding footlight of so-called intellectualism. Like the toe dancer who retains her poise because her sight is fixed on an immovable object, so must we in our ever changing world fix our sights on the silver strands of faith. The Cross is our geometric symbol of faith. The horizontal line of the cross represents man's relationship to his fellow men; the vertical his relaticnship to God. The Cross changes the minus sign of man to the plus sign of positive living.

Faith is a personal matter. Some of the godliest men I have met have been doctors. The late Dr. Howard A. Kelly, of Johns Hopkins, and the Howard A. Kelly Hospital of Baltimore, was a fervent believer. He declared in my presence, that he never performed surgery without prayer for Divine guidance. His life radiated the spirit of the Great Physician. Admiral Boone, who recently completed a long and glorious career as a soldier and surgeon, maintained the spiritual glow on the altar of his heart, so that he might minister not only to the physical needs of men, but to the spiritual as well.

II. The Blessed Hope

The causes of our nation's illness are "fear, anger and guilt."* To offset this triad of evils we have the three virtues of Faith, Hope and Love. The life span of man has been lengthened during the past one hundred years from less than forty years to about seventy years. With the progress of medicine goes the widening span of human existence. To this growth of life must be added Hope for the hereafter —a hope beyond the grave. There is a balm in Gilead it is the blessed Hope!

One evening I was invited to be the guest of a prominent doctor in Maryland. He related an incident in his practice. He was called to the residence of a prominent businessman who asked for a frank diagnosis of his physical condition. A careful examination revealed that it was a carcinoma case in the advanced stages. The information was not surprising to the patient. The man mumbled "I expected it, but I am not ready for it." At this point the physician who revealed the serious state of the patient, although unable to do much for his body, was instrumental in the salvation of his soul. When the last hours of the patient arrived, he summoned first the members of his family, witnessed to them of his new found hope. He summoned his employees, then his friends, telling of his newly found faith and the hope that he may meet them in The Father's House.

"We are laborers together with God." Jesus sent forth His disciples to heal the sick, and to proclaim The Gospel of God. The minister and the physician are co-workers with God in extending the life span of man from time to eternity. In the dark ages religious zealots obstructed the progress of science and so did some bigotted men of other professions. We have sufficient light today to know that health, whole, and holy are words derived from the same root and call for the comprehensive care for man.

It is too late to summon the clergy when the patient is ready for the final rites. Leslie Weatherhead said "The forgiveness of God is the most powerful therapeutic idea in the world."

III. The Greatest of These Is Love

The third God given remedy is Love. Within the main hall of the famous Johns Hopkins Hospital is the majestic figure of the Christ, His arms outstretched, saying, "Come unto Me all ye who are

*Dr. Smiley Blanton.

weary and heavy laden and I will give you rest." The invitation is extended to all—the alcoholic, the out-cast, the sinner and the saint to come for rest. St. Augustine said, "My soul was restless until it found rest in God." How well I recall going into that Baltimore Hospital some years ago, with a very sick wife, and the sympathetic Saviour's message of love gave me assurance. He can lift the load and give peace to the troubled soul.

The patron of the physician as well as that of the preacher is not the lean, haloed Christ pictured by the painters of the middle ages. He is a Living Loving Lord. "As the Father hath sent me, even so send I you." I have seen the calming comforting power of prayer in my ministrations as a hospital chaplain. The chaplain and pastor may play a very important role in the pre-and post-operative periods in the patient's life.

There is a balm in Gilead—and it is the Love of God. "For God so loved the world that He gave His only begotten Son, that whosoever believeth in Him should not perish but have everlasting life."

Conclusions: In this hour when man is stumbling blindly thru a spiritual darkness, it is imperative that we find the silver strand of faith, and with the healing balm of hope and love gain the secret of the more abundant life.

A picture I have frequently painted portrays a world of disease-stricken humanity. Rising above the suffering humanity is the figure of The Christ. As we gaze on the Christ who is "the same yesterday today and forever," we are distressed to see his apparent impotency in the face of this crying need. Then comes the realization that unbelief and pettiness have bound the hands of the Saviour.

"They tell me the story of Jesus is old,
And they ask that we preach something new;
They say that the Babe and the Man of the Cross,
For the wise of this world will not do.
It can never grow old, it can never grow old,
Tho' a million times over the story is told;
While Sin lives unvanquished, and death rules the World,
The story of Jesus can never grow old.
For what can we tell to the weary of Heart,
If we preach not salvation from sin?
And how can we comfort the souls that depart,
If we preach not how Christ rose again?"

In this Atomic Age the Men of the Caduceus and The Cross must be laborers together with God in ministering to the total care of humanity, in the name of Him who gives the more abundant life.

Exercise to Relieve Back Pain.

A simple exercise which strengthens the abdominal muscles can help relieve a common type of acute low back pain in some patients. The exercise is outlined by Drs. Robert P. Kelly and J. Trimble Johnson of Emory University in the August 27th Journal of the American Medical Association.

The abdominal muscles are supposed to help keep the lower spine flexible and in place, but they often become weak through lack of use. Then they are unable to control the spine when some unusual motion causes a "catch" in the back. The "catch" is accompanied by excruciating pain, spasms of the back muscles, and pain in the legs. The condition is aggravated by prolonged sitting, standing, or lying down.

The first step in the treatment is to relieve the muscle spasm by "hanging". The patient lies face down on an examining table, with his legs hanging over the elevated end of the table. This is continued at intervals until the pain and spasm subside. Then the daily abdominal muscle exercise must be started. The patient lies flat on his back on the floor with his knees bent. Thirty repetitions of the exercise are done in groups of ten, with a rest of one or two minutes between sets. The first movement consists of bending the neck, bringing the chin as near the breastbone as possible. Added to this movement in the second set is an effort to raise the shoulders slightly from the floor. In the third group the neck is bent and the shoulders are elevated as far toward a sitting position as possible.

The rhythm of the exercise is slow and deliberate. Lurching motions should be avoided.

In most cases, this exercise, done daily even after complete disappearance of the pain, will maintain the desired tone of the abdominal muscles and prevent future "catches". In addition, correct posture should be maintained.

Medico-Legal Notes . . . .

Competency

The doctor is often asked to determine whether a patient is "competent". As a general rule, this means competent to handle one's own affairs. It does *not,* unless otherwise specified, mean "accountable" or "responsible" for a crime. It does *not,* unless otherwise specified, mean that the patient has capacity to make a will. Competency to consent to an operation is a rather special type of competency which has criteria of its own. In this note, the word "competency" is taken to mean "mentally able to handle one's own affairs".

Here is where the question comes up. A confused or elderly person signs a contract to buy a car. His family later try to have it annulled on the grounds that he was "incompetent". Or, a person suffers a severe head injury and is now collecting a monthly indemnity check from an insurance company. He is badly confused, perhaps disoriented. Should the check be made out to him? Should a guardian be appointed to handle those funds?

First, it is necessary to accept the fact that "competency" is a legal concept, not a medical one. This is unpalatable to many physicians. They resent a court rejecting a medical opinion. But the court is within its rights. Competency is not a medical diagnosis in the sense that pneumonia is a diagnosis. Competency is a legal concept much the way "guilt" or "liability" are legal concepts.

Second, it is impossible to prove competency. What is done is to determine whether the patient is *incompetent.* Who ever thinks he is incompetent has to show that he is incompetent. If he fails to do that, the patient is competent. As the lawyers phrase it, the "burden of proof" is on the show of incompetency. Or to put it in basic English: every adult is presumed to be competent. Whoever wants to disturb that assumption has to prove it. A man does not have to prove his own competency. You have to prove his incompetency.

This is good rule. Competency, after all, means good business judgment. Could you *prove*—could I prove—that you (or I) exercised sound judgment when we last bought a car or an air-conditioning machine or some stocks and bonds? Can your wife prove that she showed sound judgment when she last bought a hat or a dress? It is almost impossible to prove good judgment, because no one is perfect and no purchase is ideal.

Fortunately that is not the problem. It is rather to show that the subject consistently exercises bad business judgment and that he does so by reason of disease.

The formula is this:

(1) The patient has to have a disorder of the mind, which causes

(2) Impairment of thinking, feeling and/or judgment, which in turn causes

(3) One of these three disabilities: either he

  (a) Hoards his assets, refusing to make expenditures necessary for the comfort of himself or his family, and hoards his assets because of some delusion; or

  (b) Squanders his assets recklessly, motivated by delusions, hallucinations, or marked mental deficiency; or

  (c) Falls ready prey to designing persons.

The doctor's job then is to determine whether a disorder of the mind exists. That is the first step. Obviously schizophrenia and mental deficiency are disorders of the mind. But is alcoholism (without psychosis) a disorder of the mind? Does the psychopath who has a passion for gambling suffer from a disorder of the mind? For that matter, is a psychoneurosis a disorder of the mind within the meaning of this competency formula? These are legal questions. The doctor says to the lawyer: this man suffers from periodic alcoholism—or compulsive drinking. He is sane and intelligent, but he is an alcohol habitue. So it is up to the lawyer —ultimately to the law—to determine if those diagnoses are "disorders of the mind" within the meaning of the incompetency statutes.

If it is established that the patient does not have a disorder of the mind, the doctor's next step is to determine whether this mental disorder causes an impairment of judgment. The fact that the patient is depressed, for example, is not enough. He must show bad judgment. And the doctor must be able to demonstrate the bad judgment by citing actual examples.

If these two points are established—bad judgment due to the disorder of the mind—the doctor is then

Contributed by HENRY A. DAVIDSON, M.D. *Dr. Davidson, an instructor in Legal Medicine, Medical College of Virginia, is Assistant Superintendent of the Essex County Hospital at Cedar Grove, New Jersey.*

ready for the third step. That is to determine if one of the three specific disabilities are produced. Does he hoard because of delusions, depriving his family of comforts which they can afford? Is he so gullible that a designing person can victimize him? Does he squander recklessly on ventures based on delusional thinking?

Put in this crisp fashion, the problem of determining incompetency is thus a clear-cut one. It does not depend on vague guesses, but can be formulated with considerable preciseness in this one-two-three fashion.

Clinically, the major conditions that may cause incompetency are psychoses and mental deficiency. To be sure most psychotics (that is, insane persons) are competent. But most incompetent persons are psychotic. Psychosis does not automatically mean incompetency. The burden-of-proof applies here too. Even though the patient is clearly psychotic, he cannot be branded as incompetent unless he meets these criteria. Even commitment does not spell incompetency. A man might be so depressed that he has to be in a locked ward in a state hospital simply to keep him from suicide. That does not mean that he is incompetent to handle his business affairs.

Mental deficiency with a mental age of eight or under would almost certainly mean incompetency. With a better mental age, the patient would have to be yardsticked by the criteria above listed.

Epilepsy and psychoneurosis impair competency only if and when they impair consciousness—as in prolonged fugue states, psychomotor epilepsy, amnesias, and dissociative episodes. Otherwise neither neurosis nor epilepsy can disturb the patient's competency. Organic brain disorder (as in cerebral hemorrhages, cerebral arteriosclerosis, toxic states, amnesias, aphasias and so on) may produce incompetency. But here too the specific criteria must be met. Incompetency can never be assumed no matter how severe the disorder. Incompetency is to be demonstrated, not presumed.

Cortisone and Apoplectic Stroke.

The dramatic effects of cortisone in "limiting the assault" of apoplexy have been reported by three New York physicians.

Cortisone was given to 35 patients within 48 hours after their first "stroke" and "accomplished in one day what ordinarily might take several weeks with conservative treatment," the physicians said in the September 10 Journal of the American Medical Association. "Remarkable neurological recovery" had occurred in 27 patients by the end of the third week of treatment, Drs. Henry I. Russek, Staten Island, Allen S. Russek, New York, and Burton L. Zohman, Brooklyn, said.

Until now the disease has been viewed, "at best, with expectancy, and, at worst, with defeatism." There has been no acceptable treatment to hasten recovery from the acute phase of the attack or to reduce the extent of brain injury and its associated nervous system defects. The most common method of treatment has been one of waiting for the spontaneous return of function.

However, cortisone, through its effect on nerve cells of the brain, speeded the initial recovery and promoted a sense of well-being and interest in the patients. Cortisone apparently prevents the accumulation of excess fluid around the brain cells and protects the tissues from damage by the pressure of the fluid.

In all but three of the patients the signs and symptoms of apoplexy were severe. Within 24 hours of giving the drug, 21 patients showed a striking relief of paralysis. In addition, there were unquestionable beneficial changes in mental, emotional, sensory, and psychomotor status. The greatest effects were noted among those who were nearly unconscious, mentally depressed, or apathetic. "These symptoms were replaced overnight by keen alertness and sustained interest in personal progress." Paralysis also was greatly reduced.

Active rehabilitation was begun after only one or two days of treatment. This early use of retraining methods "undoubtedly" played a part in the remarkable recovery in most cases.

In 27 patients at the end of three weeks only mild to moderate weakness in hand grip, mild foot drop, lower facial paralysis, and minor difficulties in speech and swallowing remained.

No serious side effects from the cortisone were noted in any of the patients, the authors said.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Pertussis

The Public Health Service reports that the incidence of whooping cough is unusually high this year with 36,385 cases reported during the first six months. This number exceeds any total for the previous three years. The total for the first six months of 1954 was 28,233 cases. In Virginia the total for the first six months of 1955, 861 cases, likewise exceeds any total for the previous three years. The total in 1954 for the first six months was 595.

Pertussis occurs throughout the world at any season of the year and is one of the common diseases of childhood. In large communities the incidence is generally higher in late winter and early spring; in smaller communities the seasonal incidence is variable. It is particularly to be feared in the age group 0-3 years, during which period 90 per cent of the deaths occur. Deaths from pertussis frequently result from secondary infections, commonly influenza or pneumonia. The case fatality for all ages is less than 1.0 percent. Females die more often from pertussis than do males. The reason for this is unknown but it appears to be true for all ages, all races and all climates, and has been observed for many years. Death rates among Negroes are from two to three times higher than for whites. This may be due to inadequate medical care. Rural death rates are generally higher than urban rates.

Whooping cough is most communicable during the catarrhal and early paroxysmal stages. For control purposes, the communicable stage is considered to extend from seven days after exposure to three weeks after onset of typical paroxysms. The infective agent, isolated in France by Bordet and Gengou in 1906, and called the Bordet-Gengou bacillus or Hemophilus pertussis, is carried in the secretions of the upper respiratory tract. Healthy carriers are unknown. Susceptibility is general. One attack confers a definite and prolonged immunity but second attacks, which are mild, do occur in adults and may be the source of infection for some children. They are, therefore, of epidemiological importance.

The incubation of whooping cough is commonly 7 days, almost uniformly 10 days, and does not exceed 21 days. The onset is insidious and frequently the patient is thought to be developing a cold. The course of the disease is divided by symptoms into three stages: (1) catarrhal, (2) paroxysmal, and (3) decline. The first stage lasts about 10 days. The second stage comes on two to four weeks after exposure and it is usually at this time that the diagnosis is made. The paroxysms are characterized by a repeated series of violent coughs, each series having many coughs without intervening inhalation, followed by characteristic crowing or high pitched inspiratory whoop. The expulsion of clear, tenacious mucus usually follows. The paroxysm is distressing, frequently causes vomiting, occasionally nosebleed, and leaves the child exhausted. The second stage lasts from four to six weeks and gradually passes into the third, or stage of decline. During this period the attacks become less frequent and finally disappear.

Bacteriological diagnosis of the disease may be made through the use of cough plates or, more practical and more efficient, by the nasopharyngeal swab. By the cough plate method an open Petri dish with Bordet-Gengou medium is held in front of the patient's mouth during a paroxysm of coughing and rotated slowly to insure even distribution of the spray on the plate. When the nasopharyngeal swab method is used, a fine copper wire tipped with a small cotton swab is passed through the nose to the pharynx and the swab is then streaked on a plate of Bordet-Gengou medium. The plates must be incubated three to four days to permit development of the colonies.

Many lives can be saved by delaying the age incidence of the disease. An excellent vaccine has been developed which should be used for this purpose. All susceptible pre-school children should be immunized and immunization should be started at 2 to 3 months of age. Three doses of an alum adjuvant vaccine mixed with diphtheria and generally tetanus toxoid is administered at four-week intervals for the simultaneous immunization against all three diseases. When primary immunization is properly carried out in infancy, a single reinforcing dose of DPT (Diphtheria, Pertussis, Tetanus) is generally advised at 1 to 2 and again at 4 to 5 years of age; in addition, repeat under circumstances of known direct exposure through familial contact. Infants living in institutions and in households with

other susceptible children, particularly when pertussis is prevalent in the community, should definitely have active immunization started by the time they are 2 months of age.

Schools should not be closed on account of whooping cough. Non-immune children may be excluded from school and public gatherings for 14 days after last exposure; they may be permitted to attend school if they are seen by a physician or nurse on arrival each day for 14 days after last exposure. The patient should be excluded from school and public places for the recognized period of communicability. Isolation of children over 2 years of age is often impracticable; even for those under 2, it should not be insisted upon at the expense of fresh air in the open if weather permits.

Pertussis is a disease in which good nursing and medical care are highly important, especially for children under 2 years of age. The chief measures for control of the disease are (a) prophylactic vaccination of all infants, (b) protection of young children from exposure, and (c) proper medical care of all cases.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE

	August 1955	August 1954	Jan.-Aug. 1955	Jan.-Aug. 1954
Brucellosis	2	9	22	30
Diphtheria	1	0	17	26
Infectious Hepatitis	71	163	876	2953
Measles	136	207	3692	23366
Meningococcal Infections	4	5	71	79
Poliomyelitis	94	148	193	255
Rocky Mt. Spotted Fever	5	6	36	28
Streptococcal Infections	355	302	5153	3575
Tularemia	1	1	8	26
Typhoid Fever	5	5	30	35
Rabies (In Animals)	18	18	267	272

"New Practice" Grants.

Unsecured 10-year loans of up to $25,000 each will be offered to physicians seeking to establish practices but unable to get full local financing, the Sears-Roebuck Foundation has announced. At least one loan in each of five regions across the country will be given in 1955 under an original $125,000 foundation grant.

The plan of assistance is being launched by the foundation in cooperation with the American Medical Association as "an investment in individual incentive." The foundation called it a "modest and practical plan" to "further improve America's leadership in providing medical attention."

"This is a plan aimed at creating the financial and managerial conditions best designed to satisfy the medical needs of the American people, the professional and economic needs of the American physician, and the principles of free, voluntary and unregimented practice of medicine in which the physician is beholden to no 'boss' other than his professional ethics and his professional competence." The plan is designed to be self-expanding, with all repayments to be used for further grants. Thus, every grant made will help to establish still another medical practice where needed.

The foundation said young physicians often lack two essentials, capital and business "know-how." The plan is intended to fill this gap with long-term, low-cost assistance. Grantees will make tax-free contributions to the foundation instead of paying interest. These contributions and the repaid loans will be used to establish more medical practice units. Several features are included to encourage early repayment, thus making more grants possible.

Applications for grants will be screened by a medical advisory board which has been appointed from nominations by the A.M.A. Board of Trustees. They will be considered on the basis of need for assistance, expected use of it, and effort and thought by the applicant in the understanding and solution of his own problems.

Each applicant must provide information about the town or area where he seeks to practice, indicating the need for medical care, medical resources already available, the possible reasons for the success of a new medical practice, and benefits expected for the community. He also must outline his plan of action, his previous efforts at local financing, and evidence of his initiative. An important consideration in choosing the first five participants will be their ability to serve as their regional "models."

Applications must be sent to the office of the region in which the proposed medical practice is to be established, the foundation said. They should be addressed to the Director, Sears-Roebuck Board, at these locations: Pacific Coast region—2650 Olympia Blvd., Los Angeles 54, Calif.; Southwestern—1409 South Lamar St., Dallas 2, Texas; Midwest—8 East Congress St., Chicago 5, Ill.; South—675 Ponce de Leon Ave., Atlanta; East—4640 Roosevelt Blvd., Philadelphia 32, Pa.

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

Helping Children To Do Their Jobs

Children, like grown-ups, have jobs to perform. The one that occurs to us first of all, no doubt, is school. For twelve years or more, school work is one of the most important tasks that confronts a child. The great majority of boys and girls work at their studies as well as can be expected in the light of their age and ability. But what about those who do not? Why are they in difficulty? Some, of course, are naturally poor learners. They are the easiest to help, for often no more is required than some readjustment of the school placement and help to father and mother in understanding that the slow learner can become as good and useful a citizen as his more brilliant brother or sister.

Others have special trouble with one school subject. Usually, it is reading. One of the most dramatic results seen in children's work is the poor reader who, after a relatively small amount of specialized help with the difficulty, not only progresses rapidly in ability to read, but also improves in other school subjects and changes from a discouraged and defeated boy or girl to one who can face the world with confidence and move towards a happy and useful life.

The most difficult situations are presented by the children who are so upset in their emotional life that they just cannot meet the tasks which confront them. Some are filled with fears. Some feel themselves so inadequate that they are discouraged by the least failure and unwilling to try again. Some are terribly disturbed by trouble within the home. Others feel the world is against them and exert so much effort fighting back that there is none left for anything else. And so on. Each boy or girl who is not doing his job adequately needs help in finding himself and freeing his energies for the task at hand.

Mary, who was nine years old, was doing so poorly in her school work that her mother was concerned. Although she was a bright child, she was not working up to her capacity. She was inattentive at school and did not concentrate upon her studies. As we came to know Mary, we found that she felt rejected at home and unable to compete successfully with her brothers or with the other girls of her age. She was so tense and so afraid that she took out her feelings in hostile, impulsive acts, directed mainly against her family, and at the same time was unable to make any close friendships. As we worked with Mary (and with her parents), a gradual change took place. The dawdling, flighty, distrustful way of meeting the world gave way to responsive, active and confident behavior. She began to accept her therapist as a person who could be trusted, and in this way learned that not everyone was against her. The fear of people slowly disappeared, so that in time she was able to accept the friendly advances of other children. As these fears and preoccupations became less, Mary found herself able and anxious to apply her really good intelligence to the tasks of her school work. She was, at last, doing her job.

But children have other jobs to do. Let us think of Arlene, for example. About as old as Mary, she was behaving like a much younger child. She, likewise, was unhappy in her relationships with other children. If one of her friends played with another girl, she was hurt and angry. Sometimes she fawned on other children, but on other occasions she became bossy towards them. In some ways she reflected the attitudes of the parents, who had alternately "spoiled" her, or punished her severely. She did not want to be a big girl and was insistent upon remaining as much of a baby as she could. In this way she avoided taking on greater responsibility for herself.

Childhood is a preparation for life. The boy or girl does not remain a child forever. He gradually grows up by depending less and less upon others and doing more and more for himself, by ceasing to be a baby and becoming, in turn, a self-reliant school child, an adolescent and, eventually, an adult. Thus, we see growing up as another of the big jobs that a child has to work at. Arlene was not doing this job because of her emotional difficulties. As we worked with her, she responded to our help (and to the improvement of the home which resulted from the help we gave her mother). She began to give up her pleasure in acting like a baby and to find new and

Article prepared by GILBERT J. RICH, M.D., *Director, Roanoke Guidance Center, Roanoke, Virginia. Excerpt from the 1954 Annual Report.*

greater satisfaction from a more mature way of life.

These two jobs of learning in school and of developing maturity continue throughout childhood and adolescence. We can see them in Benny, who is a typical "teen-ager" gone wrong. Benny had, indeed, a hard time in life. Mother was a weak person who, after father's desertion, had married in succession two men neither of whom was a kind step-father. Benny developed a childish hostility towards the world. He was big enough and bright enough to engage in some silly acts of delinquency which expressed his feelings but brought him no benefit. When he came to the Guidance Center, he was in conflict between his sense of guilt and his need to compensate for his feeling of inadequacy by showing the world how smart he was. As we talked things out together, he came to understand his childish impulses and to face his problems in a way fitting his age. He is now getting along with his family and his companions in an altogether new manner—and doing well in school.

These three are more or less typical examples of children who have been failing to do the important jobs of childhood, namely, progressing in school, learning the things they need to know for the future and growing up in the sense of giving up babyish ways so that they can meet the problems of life in more mature patterns of behavior. For it is the accomplishment of these results that fits the boy or girl to become a well-adjusted man or woman.

Arthritic Rehabilitation.

The combined use of drugs and a physical rehabilitation program perhaps could "salvage from their invalidism" and return to "the dignity of living" many persons with active cases of chronic rheumatoid arthritis. Results of such a program used for 38 patients at Goldwater Memorial Hospital, New York, were encouraging, according to Drs. Edward W. Lowman, Philip R. Lee, and Howard A. Rusk. They outlined the program in the August 13 Journal of the American Medical Association.

In the past rehabilitation of persons with active cases was restricted because of the danger of accelerating the disease process. Now cortisone and other drugs usually can control the spread of the disease, although they do sometimes produce undesirable side effects.

After the disease process is controlled, the program to reteach "activities of daily living" is begun. The patient is taught to perform such activities as eating and dressing without help and with maximum efficiency. As he succeeds in performing one act he moves to another, always aiming at the highest efficiency within the limitations set by his crippled muscles and joints.

In some cases use of special mechanical devices, such as wheelchairs, crutches, or long-handled combs and forks, is taught.

The psychological outlook of the patient is "a major force" in determining his success. Feelings of hopelessness, frustration, and dependence often develop because of the length and pain of the disease. Psychologists help the patient in overcoming such feelings and in setting practical goals of achievement.

As the patient prepares to return home, social workers assist him in making any necessary adjustments, such as moving to a more conveniently arranged home. Job placement offers the most difficulties, because arthritics require relatively sedentary jobs, which are limited. Retraining, following vocational testing, is sometimes part of the rehabilitaton.

In the Goldwater experiment, all 38 patients showed some improvement. Of the 18 patients who were severely disabled, 14 have been discharged from the hospital. Seven of these are totally self-sufficient and one is employed. Average disability in this group dropped from 60 to 29 per cent after two years of treatment. All 20 of the less severely disabled patients have been discharged from the hospital. Fifteen are totally self-sufficient and seven of these have jobs. Disability dropped from 30 to 4 per cent in this group.

While the program is long and expensive, it may well pay for itself in the long run either by returning the patient to work or by releasing for employment a person who has been caring for him.

The Medical Society of Virginia . . . .

REPORTS FOR 1955 ANNUAL MEETING

Executive Secretary-Treasurer

Another fiscal year has ended and another chapter written into the history of The Medical Society of Virginia—a chapter which will long be singled out as representing one of the most interesting periods in the Society's growth and progress. It is to the everlasting credit of the President, the Council and the House of Delegates that the Society never wavered or deviated from its true course when confronted with decisions of precedent shattering significance.

The mid-winter meeting of Council was held April 16, and complete minutes may be found in the June, 1955 issue of the Virginia Medical Monthly.

COMMITTEES: Thirty-six committees (12 standing committees and 24 special committees) were active during the year. Seventeen committees utilized the Society headquarters for meetings and nineteen availed themselves of other services offered by the state office staff. This represents an increase over last year and is indicative of continued progress.

The membership is urged to give careful consideration to the excellent committee reports found on the following pages.

COMPONENT SOCIETIES: The past year brought no change in the number of component societies, the figure remaining at 46. It is encouraging to report that the Louisa County Medical Society, after several inactive years, has been successfully reactivated.

Visits were made to thirteen meetings of component societies. Although this was not quite as many as the number of visits made last year, several societies were visited for the first time.

MEMBERSHIP: It was reported last year that the "magic" figure of 2400 had been reached. This year, it is a distinct pleasure to report that the figure of 2500 has been exceeded. Each year the staff believes certainly that the peak has been reached. However, the total continues to increase. The membership story follows in detail:

Members reported August 31, 1954		2451
New Members	189	
Reinstated	6	
		195
Deaths	50	
Resignations	15	
Dropped	23	
		88
Increase		107
Total membership as of August 31, 1955		2558

AMERICAN MEDICAL ASSOCIATION MEMBERSHIP: As this report is prepared, it is still a bit early to predict just how many members of the AMA the Society will have by the end of the calendar year. As the report goes to press, the Society counts 1,897 members as belonging to the American Medical Association. Unless the picture changes radically before December 31, the Society will still be authorized but two Delegates to the AMA.

MEETINGS AND CONVENTIONS: Both sessions of the AMA were attended by the Executive Secretary. Attended also were the AMA Public Relations Institute and the Medical Society Executive Conference. In addition to the above, the State Office was represented at ten meetings of state associations and eighteen meetings of civic associations. This represents a considerable increase over previous years.

SPEAKING ENGAGEMENTS: Talks were given before the Carolinas-Virginia Hospital Association, the Tidewater Home Bureau, the Annual Meeting of the State Department of Health and the South Carolina Hospital Association. The State Office also arranged for Mr. Leo Brown, Director of Public Relations of the American Medical Association, to address the Richmond Public Relations Association. The meeting addressed by Mr. Brown attracted the largest attendance in the Association's History.

SELECTIVE SERVICE: The Doctor Draft Law was extended for two more years. As a result, the State Advisory Committee experienced no letup in its work. In one thirty day period fifty-three new files were opened, and no relief is in sight. There is, however, consolation in the fact that the Committee is performing a great service for the citizens of Virginia. The National Advisory Committee has stated repeatedly that it has fewer problems in Virginia than almost any other state. This, of course, is due in large measure to the complete cooperation of Captain White and his staff at State Selective Service headquarters.

Committee work still requires 35 man hours per month.

SICKNESS AND ACCIDENT INSURANCE: For the first time a group sickness and accident plan was sponsored at the State level. The coverage, underwritten by the Loyalty Group, is now carried by 1200 members.

The fact that so many subscribed made it possible for many who had previously not been eligible for physical reasons, to avail themselves of coverage.

PROFESSIONAL LIABILITY INSURANCE: The membership should be particularly grateful to the Special Insurance Committee which has worked long and hard to negotiate a group plan of professional liability coverage at the State level. It seems likely that such a plan, if adopted, will solve most of the problems which have plagued the individual physician over the past few years. It is entirely possible that the Committee will submit a proposed plan to Council and the House of Delegates on October 16.

WOMAN'S AUXILIARY: The staff enjoyed the privilege of working closely with the Auxiliary throughout the year, and was represented at three organizational meetings of component auxiliaries.

A new record was established when forty-one members

of the Auxiliary attended a Board Meeting at Society headquarters—by far the largest group ever to meet there.

The Auxiliary cooperated with the Public Relations Committee in showing the film on "Nurses" to Future Nurses Clubs of several high schools. The Clubs are doing much to acquaint high school students with the advantages of a nursing career.

Virginia Council on Health and Medical Care: Requests for assistance in finding suitable locations continue to be received from physicians interested in practicing in Virginia. During the year, 52 requests were referred to the Virginia Council on Health and Medical Care, and Mr. Fisher reports that 5 placements were effected from that group. The Council has placed a total of 33 physicians since October 1, 1954.

Memorial to Miss Edwards: A Memorial to Miss Edwards was purchased and placed at the grave just before Easter. The marker contains the inscription "Erected by The Medical Society of Virginia".

Personnel: The State Office staff now numbers four—one less than last year. Part-time assistance is employed during peak load periods and this system, thus far, has proven most effective.

An operations study of other professional and trade organizations indicates that we are proceeding in the proper direction.

The Staff extends to the membership a most cordial invitation to visit Society headquarters at 1105 West Franklin Street, Richmond. Remember—The Medical Society of Virginia exists for you and the building and facilities belong to you. The Staff is always ready to be of assistance.

Robert I. Howard
Executive Secretary-Treasurer

Delegates to the American Medical Association

The following officers were elected at the Atlantic City Meeting, June 6-10, 1955.

President-Elect—Dwight H. Murray, Napa, Calif.

Vice-President—Millard D. Hill, Raleigh, N. C.

Secretary—George F. Lull, Chicago

Treasurer—J. J. Moore, Chicago

Speaker of the House—E. Vincent Askey, Los Angeles

Vice Speaker—Louis M. Orr, Orlando, Fla.

Board of Trustees—Leonard W. Larson, Bismark, N. D.; Thomas P. Murdock, Meriden, Conn.; James R. Rewling, Bayside, N. Y.

Member Judicial Council—L. A. Buie, Rochester, Minn.

Council Medical Education and Hospitals—Harlan English, Danville, Ill.; J. M. Faulkner, Boston

Council on Medical Service—H. B. Mulholland, Charlottesville; A. C. Scott, Temple, Texas; R. B. Chrisman, Jr., Miami, Fla.

Council on Constitution and By-Laws—B. F. Pickett, Carrego Springs, Tex.; W. W. Furey, Chicago.

Among the important actions taken by the House were:

(1) Voted the Distinguished Service Award to Dr. Donald G. Balfour, Rochester, Minn.

(2) Adopted a minority report of the reference committee which did *not* approve doctors of medicine teaching in osteopathic schools.

(3) Adopted a change in medical ethics as follows: "It is not unethical for a physician to prescribe or supply drugs, remedies or appliances as long as there is no exploitation of the patient."

(4) Disapproved purchase and distribution of Salk polio vaccine by Federal Government except for those unable to procure it for themselves and that such funds be allocated to the proper state agencies.

(5) Opposed establishment of service connection by prescription of diseases or disabilities developing after discharge from the services.

(6) Approved Federal Aid for Medical Education for construction, equipment and renovation on a one-time basis.

The membership of the State Society is urged to read the detailed reports of the various actions taken which appeared in the J. A. M. A.—June 25, pp. 667-672; July 2, pp. 735-752; July 9, pp. 835-851. Only by studying these detailed actions can the membership be informed as to the reasons for action taken on several quite controversial subjects. With so many bills of medical significance coming up at the next session of Congress, it behooves all physicians to study these actions so that they may intelligently discuss the various issues with their representatives and senators.

Attention also is called to "The President's Page", J. A. M. A., July, 1955, p. 1174. Members should read this to familiarize themselves with the A. M. A. in action, and when in attendance at the A. M. A. meetings to attend at least one reference committee hearing and a session of the House of Delegates.

J. Morrison Hutcheson, M.D.
Vincent W. Archer, M.D.
Delegates

Woman's Auxiliary

I am proud to present a report of the activities of the Woman's Auxiliary to The Medical Society of Virginia for the period from November 4, 1954 to the present date (August 23), during which time it has been my great honor and pleasure to serve as President. The accomplishments herein reported give concrete proof of the definite value of our Auxiliary to the profession, as we strive to fulfill our chief objectives, namely: "To extend the aims of the medical profession to all organizations which look to the advancement of health and health education"; "To cultivate friendly relations and promote mutual understanding among physicians' families"; and "To participate in any endeavor on the request of The Medical Society of Virginia".

I attribute the splendid success of our many accomplishments this year to the fine spirit of enthusiastic cooperation which I have received from all the officers, directors, county auxiliary presidents, and individual auxiliary members. In addition, a great measure of our success is due to the very wonderful assistance which Mr. Robert I. Howard, Executive Secretary-Treasurer of The Medical Society of Virginia, has given us in all phases of our work. We are grateful, too, for the capable and friendly help received from Miss Spencer Watkins, Miss Joann Tobin, and Mr. Edward Smith. The Medical Society of Virginia is indeed fortunate to have such a

high calibre office staff, and I wish to thank the staff personally and in the name of the Auxiliary.

I wish to express my appreciation to Dr. Carrington Williams, Sr., President of The Medical Society of Virginia, and to Dr. Charles L. Outland, Chairman of our Advisory Committee, for their interest, consideration, and helpful advice during my term of office.

In November, 1954, I was invited to the dinner meeting of The Medical Society of Virginia House of Delegates in Washington, and I am now planning to present a brief resume of activities this year to the House of Delegates when they meet on October 16 in Richmond. I attended the meeting of the American Medical Education Foundation Committee on February 25, 1955, and later the meeting of the The Medical Society of Virginia Council on April 16. I am convinced that attendance of the Auxiliary President at Medical Society committee meetings is important as a means of bringing about liaison between the Society and the Auxiliary. I recommend that the Auxiliary President and the State Legislation Chairman be invited to all meetings of the Medical Society's Legislative Committee, particularly in 1956 when the Virginia General Assembly is in session.

ORGANIZATION—There are 17 auxiliaries in Virginia at present with a membership of 1,007, an increase of 130 members since the 1954 report. The three new auxiliaries organized were: the Woman's Auxiliary to the Old Belt Medical Society, organized January 18, 1955, in South Hill; the Woman's Auxiliary to the Alleghany-Bath Medical Society, organized May 11 in Warm Springs; and the Woman's Auxiliary to the Tazewell County Medical Society, organized June 15 in Richlands. Two more auxiliaries may be formed before the end of this Auxiliary year.

I wish to express sincere appreciation to the officers and members of the Medical Societies of Old Belt, Alleghany-Bath, and Tazewell County for the privilege of being their guest at dinner meetings of physicians and their wives, and there to have had the opportunity to meet all these fine people informally and to describe briefly the value of an auxiliary to their respective societies. Without their interest and approval our new auxiliaries would not have been organized.

Assistance was given Dr. Neil Callahan, of Norfolk, in October and November, 1954, with preliminary plans for the formation of a Woman's Auxiliary to the Virginia Ophthalmology and Otolaryngology Society. On December 1, 1954, I directed the actual organization of the Auxiliary in Charlottesville, Virginia, at the Farmington Country Club.

In addition to the organization of new auxiliaries, there has been a growth in membership in existing auxiliaries. I believe some credit is due to more of our auxiliaries having orientation meetings and social affairs at which auxiliary aims and programs were described.

PROGRAM—On November 3, 1954, the day following the annual meeting in Washington, a Board planning meeting was held and attended by state officers, county presidents and presidents-elect. Plans for the year were outlined and the material from the several national chairmen was distributed to the appropriate county chairmen and presidents. We were honored to have our national President, Mrs. George Turner, speak informally. She was followed by our own Mrs. R. M. Reynolds, national Public Relations Chairman, who briefed the group on the overall 1954-55 PR program. It was also our pleasure to have present the Southern Auxiliary President, Mrs. George K. Feldner.

The first President's Newsletter, mailed November 5, requested that all Virginia auxiliaries adopt the National theme: "Leadership in Community Health" and stressed personal service in community activities relating to health and medical care needs. Reports from all auxiliaries indicate successful participation in various portions of local community projects. On January 6, 1955, my Newsletter No. 2 was sent to all officers, chairmen, county presidents and presidents-elect, and members-at-large. This Newsletter contained brief reports on the Southern Auxiliary Convention and the Chicago Conference, together with pertinent information on Auxiliary meeting dates and other Auxiliary news.

Programs presented throughout the state have dealt with a variety of interesting subjects and have included discussions on civil defense, public relations, nurse recruitment, legislation, mental health, and social affairs. Some programs included guest speakers, some had book reviews, and still others planned money-making projects. One auxiliary reported unusual interest created by attractive booklet program announcements sent monthly to each member.

At the Mid-winter Board Meeting the State Program Chairman, Mrs. C. M. McCoy, of Norfolk, spoke on the responsibility of auxiliary members as leaders in community health. She emphasized the National Safety program and stressed the importance of a family physician for every doctor's family. Mr. Robert I. Howard, Executive Secretary-Treasurer for The Medical Society of Virginia, showed a film on choosing the medical profession as a career and announced its availability for use in high schools. Time was allotted for open discussion of individual auxiliary problems and the means for solving them. A luncheon closed the meeting, during which the Woman's Editor of the Richmond Times Dispatch, Mrs. Valarie Edinger, spoke on "Public Relations and Publicity".

PUBLIC RELATIONS—In order to emphasize the significance of VIRGINIA HEALTH WEEK, we followed the suggestion of our national Public Relations Chairman, Mrs. Reynolds, of Norfolk, and obtained an official signed STATEMENT from the Honorable Thos. B. Stanley, Governor of Virginia, by which he designated the period March 21 through March 27, 1955, as STATE HEALTH WEEK. This period had also been chosen by the Junior Chamber of Commerce chapters, nationwide, to acquaint the public with the health facilities available in the community, and our State PR Chairman, Mrs. Eugene Grether, of Alexandria, was successful in planning a program to coordinate their efforts with our own. We were fortunate to obtain the complete support of Mr. Edgar Fisher, Director of the Virginia Council on Health and Medical Care, whose doctor-placement program and assistance in Virginia's rural health problems has received national recognition.

On Sunday evening, March 20, plans for observance of Health Week were described on the regular weekly

JAYCEE RADIO FORUM program, the participants being Mr. Robert I. Howard, Mr. Edward Talley, the JAYCEE Health and Welfare Chairman, and myself. HEALTH WEEK officially began with a public "kick-off meeting" held in Richmond, March 21, at the Richmond Academy of Medicine. Co-sponsoring participants were the Woman's Auxiliary, The Medical Society of Virginia, the Virginia Junior Chamber of Commerce, and the Virginia Council on Health and Medical Care. "Needs in Four Areas of Health" were presented as follows: Nutrition—Sidney S. Negus, Ph.D., profesor of Biochemistry at the Medical College of Virginia; Personnel and Training Facilities—Thos. B. Hunter, M.D., Dean of the Department of Medicine, University of Virginia, Charlottesville; Mental Health—Archibald F. Ward, Chaplain, Eastern State Hospital, Williamsburg; Public Health—Charles R. Fenwick, State Senator, Arlington. Excellent newspaper publicity was given the meeting.

Reports from county auxiliaries indicated great success throughout the state. Activities included store window displays, poster and essay contests in schools, radio and television programs, tours of hospitals and nursing schools, diabetic detection programs and education drives. One auxiliary reported a series of daily newspaper articles describing the functions of each local health agency, prefaced by the Governor's Statement, with a picture of the City Mayor endorsing the observance.

The program was most successful on a state-wide basis as a means of arousing the general public's awareness of the auxiliary's interest in the health and welfare needs of the community. Because of the success of our project, I was asked to participate in the Public Relations Round Table Discussion at the National Convention in Atlantic City, June 6, 1955, to describe Virginia's observance of "State Health Week".

In addition to this intensified PR program, county auxiliaries have assisted local health groups by providing volunteer workers to assist in the following: cancer clinics, Red Cross blood banks, Anti-Tuberculosis Association, community health centers, hospital auxiliaries, cerebral palsy workshops, community chests, Heart Association, and the Virginia Council on Health and Medical Care. One auxiliary gave a luncheon in honor of 56 presidents of the local Women's Clubs, at which Dr. Carrington Williams, President of The Medical Society of Virginia, spoke on "The Relation of Public Health to the Practice of Medicine".

NURSE RECRUITMENT—This year Virginia has again placed special emphasis on Nurse Recruitment throughout the state. Our chairman reports seven Future Nurses Clubs and several prospective ones. In widely scattered counties, the organization of such Clubs is not feasible because of transportation problems, but in these areas nursing scholarships are being offered and brochures on nursing as a career are distributed in the high schools. At present ten scholarships are being used. A total of thirty recruits as a result of auxiliary nurse recruitment work is reported. Additional activity in this field includes participation in "National Nurses Week" program, presentation of the nurse recruitment program to Junior Woman's Clubs and P.T.A.'s, and cooperation with the Graduate Nurses Association of Virginia. One auxiliary member is serving on the Careers Committee of the Virginia League for Nursing.

MENTAL HEALTH—Auxiliary programs have featured discussions on proposed State legislation related to mental hospitals. One auxiliary collected articles needed in State mental hospitals, another is assisting in the formation of a local Mental Hygiene society, and a third is working with the local Junior Woman's Club on a mental health project.

CIVIL DEFENSE—Several auxiliary members are serving as First Aid instructors and as Home Nursing teachers. Lists of available Civil Defense literature have been published and local P.T.A. groups and other organizations have been urged to plan education programs in cooperation with local Civil Defense authorities.

CLIPPING SERVICE—The State Chairman of this service acts as a clearing house for articles relating to the medical profession which appear in lay magazines. Material which appears to require further attention is sent to the office of The Medical Society of Virginia for disposition. A scrap book has been started.

LEGISLATION—Our State Auxiliary holds membership in the Virginia Women's Council of Legislative Chairman of State Organizations, and our State Chairman has worked closely with this organization. Field trips were taken to mental institutions, training schools, and child study centers, with a view toward more intelligent legislative action during the 1956 Virginia General Assembly. The Virginia Council this year affiliated with the National Council of State Legislative Councils. The Washington Newsletter and Special Reports are received by all county auxiliaries and reports from the county presidents indicate an increasing awareness among our members of their individual responsibility as citizens.

PHILANTHROPIC WORK—Many interesting and varied methods have been used for financial support of each auxiliary's particular philanthropic projects. These have included teas, bazaars, theatre parties, socials, handicraft sales, and the maintaining of Coco Cola machines. Funds have been contributed to local hospitals, TB Association, Community Councils, Cancer Society, Polio Foundation, Crippled Children's Society, American Heart Association, and the Red Cross. The Petersburg Auxiliary established a "clothes pool" for the local Child Welfare service. Each county auxiliary contributes to our State Auxiliary benevolent fund, the Leigh-Hodges-Wright Memorial Fund. This fund gives financial assistance to a physician confined as a patient in a tuberculosis sanatorium. The State Auxiliary maintains a $50 membership in the Virginia Council on Health and Medical Care, and many county auxiliaries also have separate memberships in this organization.

"TODAY'S HEALTH"—Virginia was cited at the National Convention in Atlantic City, held June 6-10, 1955, for being one of eleven states which exceeded 100% of quota set for "Today's Health" subscriptions. Virginia's figure was 107%. The Arlington County Auxiliary was awarded a first prize check of $40.00 for obtaining the greatest total number of subscriptions in Group III—those auxiliaries with a membership of 36 to 99. The Northampton-Accomac Auxiliary placed in the "1955 More Exclusive Club" by reaching a quota of 264%.

Our State Chairman, Mrs. Forrest Swisher, of Alexandria, is appreciative of the help received from three of our Members-at-Large in obtaining subscriptions.

"Bulletin"—We have 104 subscriptions to the "Bulletin", the official publication of the Woman's Auxiliary to the American Medical Association. This is an increase of 36 over last year.

Publicity—Our Auxiliary's activities have been given excellent state-wide press, radio, and television publicity. The section in the Virginia Medical Monthly reserved for Auxiliary activities has been regularly used and has been favorably commented upon throughout the state.

American Medical Association—At the Chicago Conference of State Presidents, Presidents-Elect and National Chairmen, held at the Drake Hotel in Chicago November 14 to 19, 1954, I spoke on the subject: "It's Your A.M.A.", in which I described the physical make-up of the American Medical Association and the services provided by it to the public and to the profession. Material on public relations, films on nursing, recorded radio programs, and material on various other subjects furnished by the Chicago office of A.M.A. have been used by our auxiliaries. Dr. Lull's "Secretary's Letter", the "PR Doctor" and the Washington Newsletters and Special Reports are being read throughout the State.

American Medical Education Foundation—As of July 19, 1955, the sum of $425.25 has been contributed by our auxiliaries to A.M.E.F. The importance of contributions to this fund has been stressed by the state A.M.E.F. chairman, and by the President in the Newsletters and in personal visits to county auxiliaries. The Richmond auxiliary contributed $50.00 to A.M.E.F. on March 30 in honor of Doctor's Day.

History and Archives—An up-to-date Scrap Book is kept by the State Historian, and the Auxiliary's permanent records are housed in the Medical Society's office.

Woman's Auxiliary to Southern Medical Association

Projects

Doctor's Day—Our Councillor to Southern, Mrs. Kalford W. Howard, reports that twelve county auxiliaries celebrated Doctor's Day in various ways. The Alexandria Auxiliary gave a reception in honor of Dr. H. A. Latane who had been chosen as Virginia's General Practitioner of the year. The Warwick-Newport News Auxiliary gave sample drugs and a wheel chair to the Patrick Henry Hospital for the Chronically Ill. They also obtained the Mayor's proclamation designating March 30th as Doctor's Day, with good newspaper coverage of their observance. The Richmond and Petersburg auxiliaries collected sample drugs from their husbands' offices to give to charity hospitals. Richmond also gave proceeds from a charity tea in the amount of $1,883.00 to Sheltering Arms Hospital, the only free general hospital in Virginia. The Old Belt Auxiliary, one of our newest, honored the doctors in their three counties who had practiced more than forty years and had excellent radio and newspaper coverage. Other auxiliaries sent the physicians red carnations (the official flower for Doctor's Day), sent cards, and gave dinner dances and parties in their honor.

Jane Todd Crawford Memorial Fund—Token contributions of $1.00 each were given by ten of the auxiliaries this year, pending final decision as to the use of the fund by the Woman's Auxiliary to Southern Medical Association at the annual convention in Houston, Texas, November 14-17, 1955. The State Board has recommended that the Fund be continued but used as an award to some doctor who has done outstanding research in Obstetrics or Gynecology. Four auxiliaries have had programs on the life of Jane Todd Crawford.

Research and Romance of Medicine—No papers were reported as having been sent to the Chairman of Research and Romance of Medicine. The Woman's Auxiliary to the Northern Neck Medical Society has compiled a collection of histories of all its doctors, and has presented one bound copy to the Society. One auxiliary supplied a list of the local health agencies in its locality for the files of Research and Romance of Medicine.

I was elected Treasurer of the Southern Auxiliary at the 30th Annual Convention in St. Louis, November 6-9, 1954. My association with the members of the Woman's Auxiliary to Southern Medical Association has been one of the most pleasant of my Auxiliary experiences.

The 33rd Annual Convention of the Woman's Auxiliary to The Medical Society of Virginia will be held in Richmond, October 16-19, 1955, with headquarters at the Hotel Jefferson. We shall be honored to have Mrs. Robert Flanders, of Manchester, New Hampshire, President-Elect of the Woman's Auxiliary to the American Medical Association, represent the national President, Mrs. Mason G. Lawson, who has a conflicting commitment. It will also be our great pleasure to have as our guest our Southern Auxiliary President, Mrs. Louis K. Hundley, of Pine Bluff, Arkansas.

Finally, during my term of office I was pleased to be able to visit each of our County Auxiliaries, and I wish to thank the members and officers for the friendly hospitality I received everywhere. Most of all, I thank them for the loyal support which they have each given me during this past year. It has been a distinct personal gain to have served as Virginia's president.

Mrs. Maynard R. Enlaw

Scientific Exhibits

Arrangements for the Scientific Exhibit have been handled, for the most part, on the local level.

Dr. Frank Blanton, representing the Scientific Exhibit Committee, was appointed to the Local Committee on Arrangements, and met twice with representatives of ADD, Inc., the firm responsible for booth erection and other exhibit services. All applications were carefully considered and every effort made to allot space fairly and in keeping with minimum requirements.

The Committee has every reason to believe that the 1955 Scientific Exhibit will be one of the most interesting ever presented at an Annual Meeting. All members are urged to spend as much time as possible with the Exhibits.

Allen Barker, M.D., *Chairman*
Alvin C. Wyman, M.D.
Frank M. Blanton, M.D.

Medical Service

During the past year, the Committee on Medical Service has been interested particularly in two problems, that of

Hospital-Physician Relationships and the Care of the Chronically Ill and Indigent of our State. In addition to these two problems which have been studied by the respective sub-committees, as well as the Committee as a whole, the sub-committee on Pre-Paid Hospitalization and Industrial Health have had formal meetings.

The sub-committee on Hospital-Physician Relationship, headed by Dr. James Williams of Richlands, has met with representatives from the Radiological Society and Pathological Society of the State to consider the problem of Hospital-Physician Relationships, particularly as it pertains to the members of our profession who are engaged in radiology, anesthesiology and pathology. It has probably come to the attention of the members of The Medical Society of Virginia that there has been difficulty in Norfolk and Petersburg with physicians who have refused to become employees of a hospital and these members have requested the House of Delegates to take some action for the future protection of those who are engaged in the practice of these specialties. It has been impossible to make a thorough study of the problem, but the Medical Service Committee has made the following recommendations:

1. That The Medical Society of Virginia go on record advocating no change in the Medical-Service act as passed by the Legislature;
2. That the problem be studied thoroughly and that an effort be made to find a mutually satisfactory arrangement for the hospitals and the physicians;
3. That meetings be held between representatives of The Medical Society of Virginia with their legal advisor, and representatives of the Virginia Hospital Association and their legal advisor, to see if there is some way by which the difficulties between the hospital and physicians may be settled amicably.

At the suggestion of the Medical Service Committee, the sub-committees on Chronically Ill and Medically Indigent have met jointly during this year. Dr. Malcolm H. Harris is Chairman of the sub-committee on Chronically Ill, and Dr. Kinloch Nelson, Chairman of the sub-committee on Medically Indigent. Dr. Mack I. Shanholtz, who had been asked to be a member of this committee, pointed out that as a result of the recent amendments to the Hill-Burton Act, the State Health Department is surveying Nursing Homes, Diagnostic and Treatment Facilities, Rehabilitation Centers and Chronically Ill Hospitals, for the purpose of determining if and where new facilities should be placed, and if existing ones should be changed. It is the feeling of the sub-committee that these facilities should be under the State Health Department and should be administered by the State Health Department, rather than by the Federal Government through the National Department of Health Education and Welfare. The following resolution which was adopted by the joint Sub-Committees was presented to the Medical Service Committee and passed:

Resolved, that The Medical Society of Virginia go on record as favoring administration by the State Board of Health of the Chronic Illness program, and its program, as it encompasses the prevention, treatment and rehabilitation aspects of the chronic illness problem, be structured along lines allowing state and local society approval and participation. An amendment to this resolution was passed stating that the sub-committee on Chronically Ill and the Rehabilitation Committee of The Medical Society of Virginia confer on any mutual problems that may be involved. It was further moved and passed that a Committee composed of the members of the sub-committee on Chronically Ill and the Medically Indigent should meet with Dr. Shanholtz for the purpose of advising the State Health Department on matters pertaining to chronic illnesses.

The sub-committee on Industrial Health, Chairman, Dr. Charles L. Savage, presented an abstract of the State Compensation Laws. It was the opinion of the Committee that Dr. Savage review the abstract and submit it for publication in the Virginia Medical Monthly. Should it be impossible to publish it in the Monthly, the Executive Secretary should be empowered to mimeograph the abstract for distribution to all physicians who are members of The Medical Society of Virginia. In addition to the foregoing, there has been some question as to the free choice of physicians in compensation cases and the Committee felt that any physician who has any complaint in this regard, should, through his local medical society, submit to the Medical Service Committee or the sub-committee on Industrial Health any complaint or a request for investigation as to the handling of any compensation case. It was further suggested that the sub-committee on Industrial Health prepare an exhibit for the State Society formal meeting showing available literature on Industrial Health.

There was no actual meeting on Rural Health, so there is no report of this sub-committee.

Dr. Farmer reported on the plans of the special liability insurance committee with regard to professional liability insurance and stated that he would welcome any suggestions from members of the medical profession who have any ideas on this subject.

The Vice-Chairman regrets that the Chairman, Dr. Henry Mulholland, has been unable to conduct these meetings due to the press of other work, and the Vice-Chairman wishes to extend his appreciation to Dr. Mulholland for his help and guidance, and also to the members of the Committee and sub-committees for their time and effort which they have extended on these matters of vital interest to all of the physicians of the State.

H. B. Mulholland, M.D., *Chairman*
Russell Buxton, M.D., *Vice-Chairman*
Frank A. Farmer, M.D.
James P. Williams, M.D.
Kinloch Nelson, M.D.
T. B. McCord, M.D.
Charles H. Lupton, M.D.
John G. Graziani, M.D.
Charles L. Savage, M.D.
Snowden C. Hall, Jr., M.D.

Membership

The Committee on Membership of The Medical Society of Virginia had no matters referred to it during fiscal year 1954-55, and consequently no meetings were held.

Many new members were admitted through their component societies during the year, and the Committee takes this opportunity to welcome them into The Medical Society

of Virginia. They are as follows:

Ernest Warren Adair, M. D., Radford
James Calvin Allen, M. D., Eastville
Charles William Anderson, M. D., Norfolk
Edward Randolph Archer, M. D., Norfolk
James Britton Bain, M.D., Alexandria
Donald Nelson Ball, M. D., Norfolk
Harry Bartton Beatty, M. D., Arlington
Robert Wright Bedinger, M. D., Richmond
Lester Francis Belter, M. D., Richmond
James Seymour Berger, M. D., Norfolk
John Bernard Birch, M. D., Abingdon
Charles Lee Boatwright, M. D., Blacksburg
Harvey Jerome Breit, M. D., Portsmouth
William Rufus Brown, M. D., Roanoke
James Crawford Bruce, M. D., Alexandria
John D. Bunce, M.D., Annandale
John Abbott Byrd, M.D., Norfolk
Robert Monroe Campbell, M.D., Portsmouth
Elizabeth Rowe Caro, M. D., Arlington
James Henry Carpenter, M. D., Alexandria
George Edward Chappell, M. D., Halifax
Sarah Roberts Chitwood, M. D., Pulaski
Herbert Augustine Claiborne, Jr., M. D., Charlottesville
John Washington Clark, M. D., Martinsville
Frank William Claytor, M. D., Roanoke
John Bunyan Claytor, Jr., M. D., Roanoke
Jonathan Otis Cole, M. D., Alexandria
Robert Vincent Crowder, Jr., M. D., Richmond
F. Willson Daily, M. D., Roanoke
James Breckenridge Dalton, Jr., M. D., Richmond
Joseph McDonald Damron, M. D., Winchester
Martin Donelson, Jr., M. D., Danville
James Joseph Dunne, M. D., Richmond
Byron Thomas Eberly, M. D., Portsmouth
Richard Carl Ellison, M. D., Fredericksburg
Cecil Franklin Evans, Jr., M. D., Warwick
Richard Harding Fisher, M. D., Roanoke
Zenas Waldo Ford, Jr., M. D., Warwick
David Charles Forrest, M. D., Richmond
Grossi Hamilton Francis, M. D., Norfolk
Robert Jerold Frank, M. D., Hampton
William Allen Fuller, M. D., South Boston
James Harry Gamble, M. D., Lovingston
Marshall Tobe Garrett, M. D., Charlottesville
William Frances Gibbs, M. D., Norfolk
John Breckinridge Gorman, M. D., Charlottesville
Sam Dixon Graham, M. D., Staunton
James Lee Green, M. D., Portsmouth
William Eugene Greene, M. D., Norfolk
Warren Cleaton Hagood, M. D., Clover
Brooks Lynn Hargrove, Jr., M. D., Portsmouth
Andrew Epes Harris, Jr., M. D., Blackstone
Campbell Harris, Jr., M. D., Richmond
Jaquelin Marshall Harrison, M. D., Richmond
Charles Pinchbeck Harwood, M. D., Richmond
John Quackenbush Hatten, M. D., Newport News
Paul Cornelison Hendrix, M. D., Wytheville
John Edward Hill, M. D., Richmond
Nicholas Flood Hix, M. D., Wise
Cornelia Hoch-Ligeti, M. D., Charlottesville
Emory Falcon Hodges, Jr., M. D., Alexandria
Isham Earl Holmes, M.D., Staunton
Raymond Cottrell Hooker, Jr., M. D., Richmond
Francis Gregg Horne, M. D., Hampton
Robert Clifton Hughes, M. D., Rocky Mount
William Caswell Hughes, M. D., Rocky Mount
Russell Brooks Hunt, M. D., Richmond
Thomas Harrison Hunter, M. D., Cismont
Thomas Carroll Iden, M. D., Berryville
Benjamin Harrison Inloes, Jr., M. D., Hampton
John Anderson Jackson, M. D., Portsmouth
Julian Dabney Jackson, M. D., Norfolk
Allan Hammett Jefferies, M. D., Norfolk
Leo Ernest Johns, Jr., M. D., Norfolk
Walter Winston Johnson, Jr., M. D., Covington
Bert Alfred Kanwit, M. D., Covington
Joseph Foster Kell, Jr., M. D., Richmond
John Jackson Kelly, III, M. D., Richmond
John Fox Kendrick, M. D., Richmond
Horace Eskew Kerr, M. D., Colonial Beach
Casper Sidney King, M. D., Lynchburg
Samuel Anderson Kirkpatrick, M. D., Portsmouth
Jeremiah Alexander Klotz, Jr., M. D., Norfolk
Richard Henry Laning, M. D., Amherst
Frank Everett LaPrade, M. D., Victoria
Edward Sharpe Lee, Jr., M. D., Portsmouth
James Harold Lee, Jr., M. D., Newport News
Richard Lehmann, M. D., Richmond
Lionel Melvin Lieberman, M. D., Hampton
Albin Lothard Lindall, M. D., Winchester
Lillian C. Lindemann, M. D., Richmond
Carroll Hoyt Lippard, M. D., Lynchburg
Harry Glynn Lockard, Jr., M. D., Roanoke
Alvin Penrose Long, Jr., M. D., Portsmouth
Joseph Crownover MacPhail, M. D., Portsmouth
Robert Quarles Marston, M. D., Bon Air
John William Martin, M. D., Yorktown
Robert E. Martin, M. D., Arlington
George Bernard Massie, M. D., Richlands
Antonio Mayoral, M. D., Galax
Thomas David McDonald, M. D., Grundy
Harry Stephen McGaughey, Jr., M. D., Charlottesville
John Robert McGreevy, M. D., Arlington
Robert McLelland, M. D., Danville
Edwin Thomas McNamee, Jr., M. D., Stuart
Harvey Edward Melton, M. D., Stephens City
Alfred Benjamin Miller, M. D., Norfolk
George Ridgeway Minor, M. D., Charlottesville
Eric Gaston Mitchell, M. D., Norfolk
Samuel Stuart Morrison, M. D., Leesburg
Howard Otis Mott, M. D., Arlington
William Henry Muller, Jr., M. D., Charlottesville
Frank Jerome Murphy, M. D., Arlington
Philip Foster Murray, M. D., Hampton
William Rankin Nelson, M. D., Charlottesville
Walter Stephenson Newman, Jr., M. D., Blacksburg
Ralph John Nold, M. D., Norfolk
Carl C. Nydell, Jr., M.D., Gloucester
William Hubert Orsinger, M. D., Arlington
Ralph Ownby, Jr., M. D., Richmond
Lawrence Melton Pack, M. D., Arlington
Donal Snelling Parker, M. D., Newport News
John Abb Payne, III, M. D., Sunbury, N. C.

Kenneth Newton Payne, M. D., Ft. Eustis
Samuel O'Brien Payne, M. D., Fredericksburg
George Earl Peace, M. D., Norfolk
Alfred William Pleasants, Jr., M. D., Lexington
Seigul James Polk, M. D., Lebanon
John Williams Powell, M. D., Richmond
Homer Hayden Price, M. D., Martinsville
James Nicholas Psimas, M. D., Portsmouth
William Gilmer Puryear, M. D., South Boston
John Christian Ransmeier, M. D., Alexandria
Bernard Harold Raymond, M.D., Norfolk
William Whitfield Regan, M. D., Richmond
Robert Albion Repass, M. D., Richmond
Marion Lee Rice, Jr., M. D., Kecoughtan
Ashby Turner Richards, M. D., Alexandria
Lewis George Richards, M. D., Lynchburg
Albert Vinson Rigsbee, M. D., Arlington
James Henry Roberts, M. D., Roanoke
Lucien Wood Roberts, Jr., M. D., South Boston
Nathaniel Lancaster Rodgers, M. D., Richmond
Joseph Norris Rose, M. D., Gate City
Frank Edward Rowell, M. D., Norfolk
Arnold Martin Salzberg, M. D., Richmond
Joao Gustavo dos Santos, Neto, M. D., Richmond
Charles Lawrence Saunders, Jr., M. D., Welch, W. Va.
William John Schewe, M. D., Arlington
Charles Frederick Schneider, M. D., Radford
William Marco Sheppe, Jr., M. D., Charlottesville
Claude Porter Sherman, M. D., Martinsville
Marvin Francis Sherrill, M. D., Warwick
Cecil Lowry Sinclair, M. D., Newport News
Howard Garnett Snead, M. D., Arlington
Alger Rixey Southall, Jr., M. D., Louisa
Philip Martin Sprinkle, M. D., Martinsville
Archie C. Stanton, Jr., M. D., Warwick
Thomas Lane Stokes, M. D., Norfolk
James Walter Stone, M. D., Lynchburg
William Leete Stone, III, M. D., Arlington
Ralph Wierman Stoneburner, M. D., Edinburg
Harry Glenn Thompson, M. D., Alexandria
Thomas Murrell Thornhill, Jr., M. D., Lynchburg
John Lemuel Thornton, III, M. D., Richmond
Gerald Miles Tierney, M. D., Arlington
Ernest Randolph Trice, M. D., Richmond
Frank Ryder Trigg, M. D., Norfolk
Sidney Austin Tyroler, M. D., Falls Church
Charles Newton Van Horn, Jr., M. D., Norfolk
David DuPuy Vaughan, M. D., Richmond
Fred Louis Vidal, M. D., Charlottesville
James Edward Washington, M. D., Norfolk
John Quincey Adams Webb, M. D., Norfolk
Robert B. Webb, Jr., M. D., Virginia Beach
Julian Weinstein, M. D., Richmond
Paul Cleveland Wheeler, M. D., Waynesboro
Dorothy Vermilya Whipple, M. D., Arlington
Charles Warren Whitmore, M. D., Lynchburg
Mary Claire Gossage Whitmore, M. D., Lynchburg
George Lee Wilkinson, M. D., South Boston
Eugene Lorenzo Willard, M. D,. Arlington
Frederick Mosby Williams, M. D., Norfolk
Richard Kennon Williams, M. D., Richmond
Robert Manton Wilson, Jr., M. D., Richmond
Robert Terrell Wingfield, M. D., Lynchburg
James Mounts Wolcott, M. D., Norfolk
James B. Word, M. D., Charlottesville
Paul Howard Wornom, M. D., Hampton
William Goeffrey Wysor, Jr., South Boston
Frank Anthony Zack, M. D., Roanoke

The Committee takes a distinct pleasure in recommending for honorary membership in The Medical Society of Virginia our distinguished retiring President, Dr. Carrington Williams, Richmond.

James A. Thweatt, M.D., *Chairman*
A. P. Jones, M.D.
Henry J. Langston, M.D.

Judicial

According to Article IX, Section 8, of the By-Laws, "The Judicial Committee shall study the Constitution and By-Laws of the Society and suggest necessary revisions and interpret its provisions in case of conflict or doubt as to specific meaning."

It should be stated that adoption of the Committee report by the House of Delegates does not adopt the amendments covered therein. Adoption merely clears the way for the proposed amendments to be considered on an individual basis.

The following amendments to the Constitution of the Society have been proposed and are now published in the official publication as required in Article XIII thereof:

Amend Article VIII to read as follows:

"Article VIII—Standing Committees and Editorial Board

The Standing Committees of the Society shall be (1) Scientific Exhibits and Clinics, (2) Postgraduate Medical Education, (3) Legislation, (4) Medical Service, (5) Membership, (6) Ethics, (7) Judicial, (8) Public Relations, (9) Mediation, (10) Program, and (11) Finance. There shall also be an Editorial Board for the official publication of the Society, which board shall be considered as one of the standing committees of the Society."

(The purpose of this amendment is to change the name of the Grievance Committee to Mediation Committee, and to substitute an Editorial Board for the present Publication Committee).

The following amendments to the By-Laws of the Society have been proposed in writing and will be presented to the House of Delegates for adoption or rejection at the next annual meeting:

Article IV.

Section 7. At the end of the section strike out the words "Publication Committee' and insert in lieu thereof "Editorial Board".

(This is merely a conforming change).

Article VI.

Section 4. Amend Section 4 to read as follows:

"Section 4. The House of Delegates shall at each annual session elect three vice-presidents to rank accordingly, these as far as possible to represent the various sections of the State. The House of Delegates shall also

elect a Speaker and a Vice-Speaker to take office at the next annual meeting and to serve for terms of two years each. Successors to the office of Speaker and Vice-Speaker shall be elected by the House of Delegates for like terms. In the event of a vacancy occurring in the office of Speaker or Vice-Speaker the President shall appoint a successor to serve through the next annual meeting, at which meeting the House of Delegates shall fill the office for the unexpired term or the new term as the case may be. The Vice-Speaker shall preside over the House of Delegates in the absence of the Speaker, but shall have no vote unless he is a member of that body.

(The purpose of this amendment is to provide a Vice-Speaker for the House of Delegates and to prescribe his duties).

ARTICLE IX—STANDING COMMITTEES.

Amend the first two paragraphs of the section to read as follows:

"The Standing Committees of the Society shall consist of an Editorial Board for the official publication of the Society, and additional Committees as follows:

(1) Scientific Exhibits and Clinics.
(2) Postgraduate Medical Education.
(3) Legislation.
(4) Medical Service.
(5) Membership.
(6) Ethics.
(7) Judicial.
(8) Public Relations.
(9) Mediation.
(10) Program.
(11) Finance.

"Each of these Committees with the exception of the Committees on Postgraduate Medical Education, Medical Service, Legislation, Public Relations, Mediation and Finance shall consist of three members, whose term of office shall be three years. Successors to the members who have first been appointed for one, two and three years shall be appointed for three year terms by the incoming President who shall also name the chairman of each Committee."

(The purpose of this amendment is to change the former Publication Committee to the Editorial Board, and to change the name of the Grievance Committee to the Mediation Committee).

Section 1. Strike out present Section 1 and insert in lieu thereof the following:

"Section 1. The Editorial Board shall consist of nine members, appointed by the President at the annual session at which he assumes the office of President. The members of the first board shall be appointed as follows: three for one year, three for two years, and three for three years, and their successors shall be appointed for terms of three years each. Any vacancy on the Board shall be filled by the President for the unexpired term. The Board shall conduct the affairs of the official publications of the Society in accordance with the expressed policy of the Society and its budget for the current year.

"The President shall appoint an Editor for the official publication of the Society for the ensuing year, such appointment to be made upon recommendation of the Editorial Board, but the President shall not be required to appoint the person so recommended. The Editor may attend the meetings of the Council and the House of Delegates, and shall have the privilege of the floor in these bodies."

(The purpose of this amendment is to substitute an Editorial Board for the present Publication Committee, and to prescribe the duties of such board).

Section 10. Strike out the word "Grievance" wherever it appears in the section and substitute in lieu thereof the word "Mediation".

(The purpose of this amendment is to change the name of the present Grievance Committee to Mediation Committee).

ARTICLE X.

Strike out the words "Publication Committee" and insert in lieu thereof the words "Editorial Board".

(The purpose of this amendment is to conform the Article to other changes made in the By-Laws).

J. MORRISON HUTCHESON, M.D., *Chairman*
RICHARD P. BELL, JR., M.D.
J. D. ZYLMAN, M.D.

Ethics

The Ethics Committee has had no matters of serious importance brought to its attention. The Committee urges the component societies to set up an Ethics Committee if they have none.

M. H. HARRIS, M.D., *Chairman*
GUY FISHER, M.D.
H. H. HURT, M.D.

Public Relations

The work of the Public Relations Committee during the past year has consisted of a continuance of the programs started under the Chairmanship of Dr. James P. King last year and some new ideas developed as the year progressed. The bulk of the physical work has been very ably carried out by the Society's Executive Secretary and Director of Public Relations, Robert I. Howard, and the office personnel at the Society's headquarters in Richmond. Many of the component medical societies have carried on active public relations activities during the year, and apparently quite successfully.

On November 18, 1954, the Annual Public Relations Conference was held at Hotel Monticello, Charlottesville. In spite of very bad weather, the attendance reached 65 persons. A most interesting program brought forth much favorable comment, especially on the discussions of Public Forums, Night and Emergency Call Systems, and new Radio-TV transcriptions for local use by the A.M.A. Dr. Thomas Hunter, Dean of the School of Medicine of the University of Virginia, gave an excellent after-dinner talk. He discussed the necessity of improving communications between the medical population and the public, as a means of better public relations.

With the program for the year thus launched, activities picked up momentum. Very successful public medical forums were held in Richmond, Lynchburg and Newport News.

The campaign to enlist the aid of the Welcome Wagons was enlarged and since October, 1954, there have been 23

new Welcome Wagons added to our participating list. This makes a total of 41 now in use over the State, covering 26 communities. This method has accounted for a distribution of pamphlets totalling 96,800 since June, 1954. This has been a very successful undertaking and its continuance and enlargement is highly recommended.

Another segment of the activity carried over from previous years centers around the Radio and TV programs of public relations. Eleven new radio stations were added to our list of participants with a total now of 29. Since the last report there have been 1,023 programs broadcast over the state, representing 256 hours of free radio time on public service listings. In addition, 19 TV programs were shown for a total of 9 hours of broadcasting.

The extremely high rate of public relations pamphlet distribution has been continued by our office staff at Richmond. Since January 1 of this year, 234,479 pieces of literature have been mailed out. Orders continue to come in with no slackening of the pace. We did not anticipate such a demand when the budget was prepared last year but the extra postage needed can be made up from other sources satisfactorily. Throughout the State we have enlisted the aid of the Pharmacists in distributing the four A.M.A. pamphlets entiled "Quack", "Why Wait", "Health Today", and "On Guard".

A very effective piece of literature was gotten up by Mr. Howard in the form of a PR booklet entitled "You Are A Member of the Team". This was a compendium of previously used "Bulletins for Office Personnel", reduced to pocket size and incorporated into a single unit. Copies were sent to the active membership and struck a chord of response that required an additional printing of 500. Quite a few of these went to outside organizations, industrial and otherwise, where they brought much favorable comment.

Programs on Nursing as a career were put on in two high schools using an A.M.A. film on "Nurses" as a basis for the demonstrations.

The VideoGraph, an instrument purchased this year to assist in giving lectures, was used in Public Relations programs presented before the Carolinas-Virginia Hospital Association, the South Carolina Hospital Association, the Annual Meeting of the State Department of Health and the Newport News Home Bureau.

"Current Currents", the monthly bulletin from the Richmond office of the Medical Society has been sent each month to all the members. Its usefulness is high and its contents excellent.

The awarding of Certificates of Appreciation has gone forward this year. These certificates are presented to the radio stations throughout the State that carry our various programs. Stations seem anxious to receive and display this recognition of their contribution.

In order to carry on the work of this committee adequately several pieces of apparatus have been purchased this year, including a Slide Projector, a "Magic Lantern" projector, a new viewing screen and the above mentioned VideoGraph Board.

An attempt is being made to enlarge the coverage of medical personnel involved in public relations activities for next year. The Annual Conference has been designated as a County Society Officers Conference, to be held at Williamsburg, September 16th and 17th. It is hoped that in this way, not only will more component societies and more individuals be brought up to date and made more enthusiastic about Public Relations, but the program can be started earlier in the Fall, and coordinated better with the business year of the Society as a whole.

This report summarizes the work of the Public Relations Committee for the year past. Much has been done but much more needs to be done. Public Relations can do more to make, or break, the Practice of Medicine as we know it and we wish to keep it, than any other single factor we face. It behooves each and every one of us to study and participate in better public relations.

HARRY C. BATES, JR., M.D., *Chairman*
JOHN WYATT DAVIS, JR., M.D. *Vice-Chairman*
JAMES P. KING, M.D.
W. T. THOMPSON, M.D.
MASON C. ANDREWS, M.D.
FRED D. MAPHIS, M.D.

Grievance

The Grievance Committee of The Medical Society of Virginia has had no meetings during the year. Several new cases were presented, and there was some follow-up on cases previously considered. It was possible to present the material through correspondence, and consequently no formal committee meeting was required. One case is pending at this writing, which may require a meeting of the committee during the late summer.

Acting in the temporary capacity of chairman, due to the regrettable ill health of Dr. Caudill, I wish to thank the other members of the committee for their promptness in reviewing material and giving the benefit of their judgment. I also wish to thank the members of the committees of the local societies for their assistance and cooperation.

JOHN T. T. HUNDLEY, M.D.
Acting Chairman

Finance

The financial report, including the budget for 1955-1956, will be presented to the Council and the House of Delegates at the Annual Meeting in Richmond on October 16.

HARRY J. WARTHEN, JR., M.D., *Chairman*
WALTER B. PORTER, M.D.
FLETCHER J. WRIGHT, JR., M.D.

House

Your House Committee is pleased to report that all the space in the headquarters building at 1105 West Franklin Street is occupied. The third floor is now used as the headquarters of the Virginia Graduate Nurses Association, while the second floor is occupied by the Virginia Academy of General Practice and the Virginia Mental Health Association. These three organizations share in the costs of our building to the extent of $1,320.00 a year, which represents a considerable saving on the part of The Medical Society of Virginia.

We are also happy to report that our repair and maintenance costs fell well within the amount provided for these items in our current budget despite several expenses

which had not been anticipated. These included changes in the lighting for the middle office on the first floor and extensive work on the third floor prior to its occupancy by the Graduate Nurses Association.

Five hundred dollars was appropriated for building repair and $2,000.00 for building maintenance.

Our expenses during the past 12 months were as follows:

Upkeep (including repairs)	$ 612.05
Fuel	267.35
Utilities	266.35
Taxes	396.35
Janitors Salary	986.00
Janitor's Supplies	80.63
Fire Insurance	45.37
Liability Insurance	45.90
Total	$2,700.00

This sum is decreased by the $740.00 contributed thus far by the three organizations which share space in our building, thus giving a final total of $1,960.00 or $540.00 within our budget.

DONALD S. DANIEL, M.D.
FLETCHER J. WRIGHT, JR., M.D.
HARRY J. WARTHEN, JR., *Chairman*

Cancer

Annual reports from the Tumor Clinics certificated through this Committee and desiring re-certification for the coming year were received and reviewed. The Committee recommends that the following Clinics be certificated:

McCluer Tumor Clinics, Alexander
Arlington Hospital Clinic, Arlington
Kings Mountain Memorial Hospital Tumor Clinic, Bristol
C. & O. Hospital Tumor Clinic, Clifton Forge
Memorial Hospital Tumor Clinic, Danville
Lynchburg Tumor Clinic, Lynchburg
Eastern Shore of Virginia Tumor Clinic, Nassawadox
DePaul Hospital Tumor Clinic, Norfolk
Norfolk General Hospital Tumor Clinic, Norfolk
Wise County Tumor Clinic, Norton
Portsmouth Diagnostic Tumor Clinic, Portsmouth
Tri-County Tumor Clinic, Richlands
Medical College of Virginia Tumor Clinic, Richmond
Jefferson Hospital Tumor Clinic, Roanoke
Lewis-Gale Hospital Tumor Clinic, Roanoke
Memorial Hospital Tumor Clinic, Roanoke
Louise Obici Hospital Tumor Clinic, Suffolk
McIntire Tumor Clinic, University of Virginia.

Last year, the Newport News-Warwick Diagnostic Tumor Clinic was approved. Its operation in the City Health Department proved unsuccessful. The Clinic, headed by Dr. R. A. Davis, is being reorganized and moved to the Riverside Hospital. The Committee recommends that the Riverside Hospital Tumor Clinic be certificated.

The Dixie Hospital Tumor Clinic at Hampton, approved last year, did not seek re-certification this year.

Ever since this Committee was organized, it has operated on the basis of an unwritten agreement between The Medical Society of Virginia and the Virginia Division of the American Cancer Society. The growth in size and numbers of the Tumor Clinics, the expansion of the programs of the Virginia Division of the American Cancer Society, and the increasing number of people active in the Cancer Society with consequent more rapid turnover of governing personnel, all make it inadvisable to continue working together on the basis of an unwritten agreement. The Cancer Committee and the Virginia Division of the American Cancer Society would like the agreement recorded and approved by both the Medical Society and the Cancer Society before confusion or misunderstanding arises.

The Cancer Committee prepared the statement which follows. It was first submitted to the Council of the Medical Society, which approved it and directed the Cancer Committee to recommend its adoption by the House of Delegates if it were ratified unaltered by the Virginia Division of the American Cancer Society. It has been ratified by that organization and therefore the Cancer Committee recommends adoption of the following:

"The Virginia Division of the American Cancer Society will give financial support to tumor clinics and diagnostic tumor clinics approved by The Medical Society of Virginia, and to no others.

"The Virginia Division will pay for certain expenses of patients being investigated or treated for cancer only when the medical services are rendered in such an approved clinic, or in an institution associated with an approved clinic and under the supervision of that clinic's staff, or an American College of Surgeons approved clinic with which the Virginia Division has arranged reciprocity. The Virginia Division will be guided by the Medical Society in deciding what services to pay for.

"Plans for all projects about which the Virginia Division thinks the medical profession might be concerned (medical service and professional educational projects are outstanding examples) will be submitted to the Medical Society for review, and will be undertaken by the Division only after a mutual agreement has been reached.

"The Division will always welcome suggestions and advice from the National Society."

JOSEPH W. HOUCK, M.D.
W. ROSS SOUTHWARD, M.D.
JOHN R. KNIGHT, M.D.
ALVIN C. WYMAN, M.D.
FRANK D. DANIEL, M.D.
GEORGE COOPER, JR., M.D., *Chairman*

Conservation of Sight

Our Committee has been relatively inactive during the past year. A proposal to recommend to the State Health Department a change in the prophylaxis of the eyes of the newborn was referred to this Committee. Before the opinions from the members of the Committee could be gathered together, the proposal was withdrawn.

It is of interest that all members of the Committee responded and some of them apparently exerted considerable effort in a study of the problem. In general, they were against a change from the present method of prophylaxis except where such changes were under the

supervision of physicians who were conducting studies on the effectiveness of other prophylactic agents. Among the reasons given for this opposition to change were the absence of a proven safe, effective, and economical substitute for silver nitrate.

The Committee recognizes the desirability for an effective prophylaxis agent that would eliminate the reaction incident to silver nitrate. Such an agent should be sought by controlled experimental work done where there are enough births for the results to be statistically significant.

Edgar Childrey, Jr., M.D., *Chairman*
Parker H. Lee, Jr., M.D.
William F. Hatcher, M.D.
F. O. Fay, M.D.
Meade C. Edmunds, M.D.

Federal Medical Services

There have been no formal meetings of the Committee, but several problems have been referred to it and they have been decided by mail or telephone. In addition, several members of the Committee have addressed local gatherings, both lay and medical, in regards to the present feeling of the American Medical Association for the care of veterans.

Charles M. Caravati, M.D., *Chairman*
John O. Boyd, Jr., M.D.
W. L. Nalls, M. D.
E. C. Drash, M.D.
Thomas W. Murrell, Jr., M.D.
Robert L. Payne, M.D.

Advisory to Woman's Auxiliary

The committee has not been too active but has cooperated in all projects when called upon. The chairman accompanied a delegation to visit Governor Stanley to request that the week of March 20th be designated "State Health Week." We were very proud of the fact that he was willing to make a statement on this, and especially so since the president of A.M.A. was a prominent member of The Medical Society of Virginia. The Auxiliary has busied itself in many ways and several new local auxiliaries have been formed. Speaking for myself and the members of the committee it has been a pleasure to serve the Society in this capacity.

Charles L. Outland, M.D., *Chairman*
Donald S. Daniel, M.D., *Vice-Chairman*
James L. Hamner, M.D.
Lloyd B. Burk, M.D.

National Emergency Medical Service

Although no called meeting of this Committee as a whole was held, the various members have been called upon for recommendations and assistance during the year. We are pleased to report considerable progress in our efforts to prepare the state and the medical and allied professions for service should disaster occur.

Additional first aid supplies have been ordered for two communities. Equipment and supplies for four 200-bed improvised hospitals have been ordered at a cost of $26,435.00 each, half of which expense is borne by the State. F.C.D.A. has been requested to assign five more such hospitals to Virginia at no expense to the state, and staffs for all nine hospitals have been organized with the exception of certain non-professional personnel.

The full time public health nurse assigned to the Office of Civil Defense resigned in June to accept a teaching position, but the advisory nurses of the State Department of Health are now being rotated through this service every three months. This will be of great assistance in organizing and training our Civil Defense professional personnel throughout the state, as these nurses are assigned to districts and can act as advisors to the local groups. Disaster preparedness has now been made a definite function of the local health departments, and the health director is required to have a definite program of expansion of public health facilities for the care of evacuees in mass care areas. The U. S. Public Health Service has been delegated authority by the F.D.C.A. to assist the states in such expansion programs and to act also in case of an emergency. Two meetings with the Public Health Service on Environmental Sanitation, and sanitation concerned with ABC warfare have brought good results. The Public Health Service is now conducting schools on sanitation at the Robert P. Taft Sanitary Engineering Center at Cincinnati, and one on Diagnosis and Medical Care for Physicians and Nurses at Chamblee, Georgia.

Two new manuals for practical and professional nurses have been published, and new nurses study clubs for refresher courses have been formed. The Civil Defense nurse made talks to fifty groups on Civil Defense, including clubs, schools, civic organizations as well as hospitals, nurses schools and nursing groups. As Chief of Medical Services, Office of Civil Defense, your chairman addressed four medical societies and hospital staff meetings on Civil Defense and attended nine meetings. Medical and dental students at the Medical College of Virginia are now receiving limited instruction in Civil Defense.

Although there is much to be done, particularly in the support areas which comprise the greater part of the state, we feel gratified with the year's accomplishments. Great thanks are due the members of the Committee.

W. R. Southward, Jr., M.D., *Chairman*

To Confer with the State Board of Nurse Examiners

The Committee to Confer with the State Board of Nurse Examiners appointed by Dr. Carrington Williams, President of The Medical Society of Virginia, has, at the time of this writing, had no formal meetings and has had no request, either from physicians or nurses, to consult.

C. Bruce Morton, III, M.D.
Russell V. Buxton, M.D.
John A. Shackelford, M.D.
Eugene L. Lowenberg, M.D.
Frank Johns, M.D.
Malcolm H. Harris, M.D.
James M. Habel, Jr., M.D., *Chairman*

Poliomyelitis

February 1, 1955. The chairman of the committee was consulted by the State Department of Health regarding the statewide use of Salk Poliomyelitis Vaccine. He felt that this was in accord with the action taken by the committee last year when the question of its use in field trials

was presented and he advised the State Health Department to proceed with plans for administering the vaccine if its use should be approved by the Francis Evaluation Committee.

March 14, 1955. The State Department of Health held a Polio Planning meeting in Roanoke to explain the use of the Salk Vaccine and to complete plans for its administration should it be approved by the Francis Committee.

April 12, 1955. The report of the committee headed by Dr. Thomas Francis on the evaluation of the Salk Poliomyelitis Vaccine was made to the world and many, including a majority of the committee of The Medical Society of Virginia, heard and saw this report on television.

April 17, 1955. 20,420 vials of Salk Vaccine was received in the State at eight airports and distributed throughout the State.

April 19, 1955. 2,220 additional vials of vaccine was received.

May 17, 1955. A meeting of the Poliomyelitis Committee was called at the request of the State Health Commissioner, Dr. Shanholtz, by the Chairman, Dr. Sutton. The meeting was held in the Conference Room of the State Department of Health. The following resolutions were adopted:

I. 1. Every effort should be made to obtain vaccine for the second doses before schools close.
   2. The second doses are to be given whenever the vaccine is received.

II. 1. Since it has been the policy of the State and Local Health Departments to supply vaccines to those who cannot pay, this policy should be extended to include poliomyelitis vaccine.
   2. Vaccine for those who cannot pay should be handled by State and Local Health Departments with the cooperation of local medical societies.

III. When commercial vaccine becomes available, the committee believes that laws should not be established for its control, but that adequate publicity covering age priorities should enable local medical societies to supervise their own areas and prevent abuse.

IV. The Committee believes that if the vaccine is produced and tested by Dr. Salk's original formula, it is safe. Experience to date in the use of the vaccine in Virginia has given no reason to suspect its safety.

July 6, 1955. A meeting of the Poliomyelitis Committee was called by the Chairman at the request of the State Health Commissioner to discuss giving the second dose of the vaccine. The meeting was held in the Conference Room of the State Department of Health. With schools closed for the summer it was recognized that many administrative difficulties would be encountered and it was believed that no more than 50% of the children to be inoculated would receive their second doses. It was recommended that giving the vaccine be postponed until after the schools reopen. It was recommended that the vaccine on hand in the State be given in some area in which polio is not prevailing before October 1, the date of expiration.

August 1, 1955. Request from the Fairfax County Medical Society for vaccine to complete second doses on account of prevalence of polio in the county, chiefly in the 1-5 age group, was received by the State Health Commissioner and presented to the committee for advice. Members of the committee were polled by telephone. Dr. Hood, Dr. Hoover, and Dr. Birdsong were away on vacation. The chairman, Dr. Harper, and Dr. Romaine voted to respect the request of the physicians of Fairfax County and to recommend to Dr. Shanholtz that he request the N.F.I.P. to furnish the vaccine. This was done.

It is a pleasure to report that the number of paralytic poliomyelitis cases for the period of time, January 1 to September 1, for the years 1954 and 1955 for the State of Virginia, has shown a decline from 152 to 64 cases.

The death rate has remained the same, five each for the same period of time.

The incidence of poliomyelitis reported for the State shows a drop comparing the two years 1954 and 1955 to be from 255 to 195.

To the year 1955 may be reported in addition 29 cases which have been reported as viral meningitis without paralysis.

It is quite possible that many of the cases which have and are being reported as non-paralytic poliomyelitis are an infection with some other filterable virus such as the "Coxsackie" type. Laboratory tests are yet to be reported.

R. B. Bowles, M.D.
E. A. Harper, M.D.
Robert C. Hood, M.D.
Roy M. Hoover, M.D.
Mason Romaine, M.D., *Secretary*
Lee E. Sutton, Jr., M.D., *Chairman*

Maternal Health

The Committee on Maternal Health met at the Commonwealth Club, Richmond, Virginia, June 16, 1955. Those present were: Dr. A. Tyree Finch, Dr. George S. Hurt, Dr. John R. Kight, Dr. Edwin Rucker, Dr. L. L. Shamburger, Dr. W. N. Thornton, Dr. James J. Dunne an invited guest of the Committee, and Dr. H. Hudnall Ware, Jr., Chairman.

A report on the survey of maternal deaths showed that fifty of the sixty-two deaths had been reported.

A motion was made by Dr. Thornton, seconded by Dr. Finch and carried, that the case reports on maternal deaths be sent to the members of the committee for comment. These reports are to be received at intervals by the committee.

The committee went on record as favoring, except in emergency, consultation with another qualified physician in all first caesarean sections, and in all curettages or other procedures by which a known or suspected pregnancy may be interrupted.

At a combined meeting with the Committee on Child Health the joint groups discussed the use of Polymixin and Bacitracin in prophylaxis in the eyes of the newborn.

The two committees suggest that recommendation be made through the State Health Department to the medical staff of each hospital, "that supervision of newborn and premature nurseries be delegated to one member of the hospital staff, preferably one who has been trained in this particular field. All policies of the nursery should be the responsibility of this physician. This directive does

not imply relinquishing of the patient or selection of a consultant."

It is further suggested by the committees that all hospitals be encouraged to have a neonatal death conference. The frequency of such conferences would, of course, vary with the hospital group.

We are happy to report a total of only sixty-two maternal deaths in Virginia in 1954, a rate of one maternal death in every two-thousand live births. This is less than one tenth the maternal death rate per 1,000 live births in Virginia in 1935, the lowest maternal mortality in the history of Virginia.

GARRETT DALTON, M.D.
A. TYREE FINCH, M.D.
E. S. GROSECLOSE, M.D.
GEORGE S. HURT, M.D.
JOHN R. KIGHT, M.D.
W. L. MCMANN, M.D.
EDWIN RUCKER, M.D.
L. L. SHAMBURGER, M.D.
W. N. THORNTON, M.D.
H. HUDNALL WARE, JR., M.D., *Chairman*

Child Health

The Child Health Committee met at the Commonwealth Club in Richmond on June 16, 1955. After a short meeting the committee continued with the Committee on Maternal Health.

The two committees suggest that recommendation be made through the State Health Department to the medical staff of each hosiptal "that supervision of newborn and premature nurseries be delegated to one member of the hospital staff, preferably one who has been trained in this particular field. All policies of the nursery should be the responsibility of this physician. This directive does not imply relinquishing of the patient or selection of a consultant."

It is further suggested by the committee that all hospitals be encouraged to have a neonatal death conference. The frequency of such conferences would, of course, vary with the hospital group.

The joint groups propose that the House of Delegates of The Medical Society of Virginia recommend to the State Board of Health that the use of prophylaxis in the eyes of newborns be amended so that polymixin or bacitracin may be used instead of silver nitrate. This action will be dependent on the approval of the Virginia Society of Ophthalmology and Otolaryngology, which will meet at a later date.

Dr. John Walke, Virginia chairman of the American Academy of Pediatrics Committee on Fetus and Newborn, was not able to be present at the meeting but he issued an invitation to the Committee on Maternal Health that a member be present at the next meeting of his committee.

EDWIN L. KENDIG, JR., M.D., *Chairman*
ROBERT M. COX, JR., M.D.
MCLEMORE BIRDSONG, M.D.
WILLIAM E. CHAPIN, M.D.
PAUL HOGG, M.D.
JOHN O. RYDEEN, M.D.
JOHN T. WALKE, M.D.

Walter Reed Commission

The work of the Walter Reed Commission was dealt a severe blow with the death of Dr. H. A. Tabb. Dr. Tabb had long manifested a great interest in the Walter Reed birthplace, and it was largely through his efforts that the house and property were maintained in a presentable state.

Every effort was made during the year to have "Belroi" taken over by either the National Park Service or some appropriate agency or organization. Mr. John E. Worden, Jr., Public Information Officer of the Walter Reed Medical Center, was able to interest the Association of Military Surgeons in the property, but after an inspection and study, the Association stated that it was unable to assume the responsibility.

Dr. A. A. Creecy, Councilor from the First Congressional District, contacted National Park Service officials in Washington, but found that it would not be possible to administer the property from the Yorktown office.

Much work, in the form of plastering and painting, must be done if the Society desires to properly maintain the house. It is with this thought in mind that the Commission requests an appropriation of five hundred dollars ($500) to see it through the next fiscal year.

MALCOLM H. HARRIS, M.D., *Chairman*
RICHARD B. BOWLES, M.D.
JOHN R. GILL, M.D.

Recommendations for a Medical Society of Virginia Seal

Your Committee to bring in recommendations for a State Society Seal has been active during the past year in drawing up various types of seals which shall be submitted to the Council at the October meeting.

J. W. LOVE, M.D.
WYNDHAM B. BLANTON, M.D.
HARRY J. WARTHEN, JR., M.D., *Chairman*

Liaison

The Liaison Committee of The Medical Society of Virginia attended the third conference on medical care in the bituminous coal area sponsored by the Council on Medical Service and Industrial Health of the A.M.A. This conference was held in Huntington, West Virginia, on October 23rd and 24th, 1954.

This meeting is held to consider the problem of medical and hospital care for miners and their families of five states which were represented, Kentucky, Pennsylvania, Tennessee, West Virginia and Virginia.

The Committee recommended to this conference that something should be done to encourage physicians to locate in the mining area. It was explained to them about the services of the Council on Health and Medical Care in Virginia and the fine job they are doing to place physicians in the rural areas.

We felt that since the U. M. W. A. has established one of its memorial hospitals in the State of Virginia, in Wise County, near Norton, our committee should try to help establish hospital and physician relationships between this hospital and the surrounding territory.

We again recommended to this conference that something be done in the way of paying fees on home obstetrical cases. In each conference this question has been

brought up but so far nothing has come out of it from the U. M. W. A. fund.

A full discussion was made on the over-hospitalization of patients and our committee recommended an indemnity type of insurance whereby the patient would pay so much on the total bill. This, we felt, would aid in keeping down the over-hospitalization stay and also reduce the number of admissions for conditions which are not necessary. We feel that the program would gain through this type of medical care.

The delegation from Virginia invited the Conference to be held in 1955 in the State of Virignia, but due to hotel accommodations, this conference is to be held in Charleston, West Virginia, on September 29th and 30th, 1955.

James P. Williams, M.D., *Chairman*
John Boyd, M.D.
Rufus Brittain, M.D.
W. B. Barton, M.D.
Max Shanholtz, M.D.

Mental Hygiene

The Mental Hygiene Committee of The Medical Society of Virginia met twice in Richmond during the past year: on December 7, 1954, and on April 22, 1955. At the latter meeting our Committee was honored by the presence of our President, Dr. Carrington Williams, and Mr. Robert I. Howard, Executive Secretary of the State Medical Society. Dr. Williams' interest in and suggestions to the Committee were greatly appreciated.

The major projects the Committee discussed and considered were: (1) The question of Blue Cross and Blue Shield coverage for mentally ill patients; (2) Alcoholism; (3) Responsibility for the medical and psychiatric care of patients in nursing homes; and (4) Plans for presenting to local medical societies programs on mental health problems.

At the April 22nd meeting, Dr. Richard J. Ackart, Executive Director of the Virginia Hospital Service Association and the Virginia Medical Service Association, was present and gave us a detailed account of the present Blue Cross and Blue Shield coverage for nervous and mental disorders in the various localities of the State of Virginia. For several years Dr. J. R. Saunders, Chairman of our Subcommittee on Blue Cross and Blue Shield, has been actively working to bring about better coverage for the mentally ill patient. It is the feeling of this Committee that some progress is being made as the rates allowed for nervous and mental disorders have increased during the past three years. Dr. Ackart has cooperated with this Committee in a conscientious effort for better allowances for nervous and mental disorders.

In recent years, as you might recall from our 1954 report, the American Medical Association has established a Council on Mental Health. In November, 1955, the Council is holding its second annual conference of mental health representatives of state medical associations. Last year Dr. David C. Wilson was our representative at the first meeting of the Mental Health Council. The meeting in November, 1955, will again be held in the auditorium of the American Medical Association's Chicago Headquarters. The agenda for this meeting is listed as follows: (1) The narcotics problem as it effects general medicine; (2) Methods of integration of mental illness and public mental hospitals with the total medical community; (3) Our future relationships with clinical psychologists; (4) A discussion period in which general problems, such as (A) Commitment problems; (B) Establishment of psychiatric units in general hospitals; (C) Setting up of psychiatric consultation services for general medical men; and (D) Development of committees on mental health at county medical society levels.

Your Committee feels that the interest and concern of the American Medical Association in mental health will reenforce the work of this Committee and bring about greater support of the Mental Health Program by the State Medical Society.

Dr. David Wilson, Chairman of the Subcommittee on Alcoholism, met with Dr. James King, President-Elect of The Medical Society of Virginia, Drs. Claude Nunnally, John Hundley, and William Sheppe, Jr., and Mr. Robert Howard, in Charlottesville, on June 11, 1955.

At this meeting the first matter of business was consideration of the report of the commission on alcoholism. The subcommittee felt that a few changes should be made. The first recommendation was that the clinics and the research programs which are to be set up at the University of Virginia Medical School be closely coordinated with that of the Medical College of Virginia. It was felt that the research effort especially should always be one effort rather than two separate ones. The next recommendation was that some provision be made for women patients in the state farm institution proposed for chronic inebriates. It was felt by the committee that the plan to place a five cent tax on each bottle of spirits sold in the A.B.C. stores should also be applied to the sale of fortified wines. The committee gave the general plan of the commission unanimous approval and voted to suggest to the mental hygiene committee that in its report to the House of Delegates of the Medical Society, the House of Delegates be urged to give all support to this report of the commission before the Legislature. It was felt by the subcommittee also that the mental hygiene committee should set up a permanent subcommittee on alcoholism so that membership can have some permanency and long-time programs both for the care of alcoholics and for the investigation of the problem of alcoholism could be undertaken by this committee on a long-time basis.

It was resolved that the mental hygiene committee send a recommendation to the Virginia Hospital Association that suitable facilities be provided in the local hospitals for taking care of the alcoholic.

It was resolved that the mental hygiene committee arrange through the local societies that one or more local physicians be designated as best qualified to take care of the acute alcoholic in the community. It was felt by the subcommittee that acute alcoholism is a very serious medical disease, the treatment of which is changing almost from day to day, and therefore it was necessary that definite local physicians become more or less specialists in the treatment and care of the acute alcoholic. It was felt also that this man or men should be available so that no acute alcoholic would be without adequate treat-

ment for more than forty-eight hours, whether in jail or in the hospital.

The resolution was made that the legislative committee of the Medical Society be instructed to use every effort to obtain passage of the report of the commission.

It was resolved that each county society create a committee to study the problem of alcoholism.

It is recommended by this Committee that the membership of the Mental Hygiene Committee and the Subcommittee on Alcoholism be appointed on at least a three-year basis and staggered by initiating membership at different times.

In presenting this report we hope that the House of Delegates of The Medical Society of Virginia will lend its support to some, if not all, of the recommendations of your Committee on Mental Hygiene.

Rex Blankinship, M.D., *Chairman*
John R. Saunders, M.D.
Joseph R. Blalock, M.D.
Thomas S. Edwards, M.D.
John B. McKee, M.D.
E. Bruce Mewborne, M.D.
James P. King, M.D.

Tuberculosis

The use of antituberculosis drugs has resulted in tremendous improvement in the treatment of the individual patient, but has multiplied the public health problem.

First, the patients are less willing to enter the sanatorium, feeling that they can be successfully treated at home. This attitude is, unfortunately, too often encouraged by the local doctor.

Second, the patient who has active disease and fails to remain in the sanatorium for isolation and treatment is a serious public health problem. Additional laws and regulations should be available to health officers in order to control these recalcitrant individuals.

Third, tuberculosis is becoming a disease of older age groups, especially elderly males. This also produces a problem in handling the patients. Many of these are physically disabled and often senile mentally. They do not require sanatorium care but do need some continuous supervision. A well regulated nursing home could care for such individuals at far less cost than an institution.

It is recommended that The Medical Society of Virginia go on record as approving adequate laws to control open cases of pulmonary tuberculosis when they have refused sanatorium care or have left the institution against advice.

E. C. Drash, M.D., *Chairman*

Rehabilitation

The Rehabilitation Committee, also serving as the Professional Advisory Committee to the Vocational Rehabilitation Service, State Department of Education, has continued to perform its regular functions during the past year.

Individual Committee members, located in various geographical areas and representing several specialty fields, have provided consultative services to the professional staff of the Rehabilitation Service on a continuing basis. Professional advice was given on a substantial number of rehabilitation cases involving complicated medical problems. Also, the Committee has given professional guidance to the Agency in the further development of its professional fee schedule and in the development of additional procedures and policies concerned with the provision of physical restoration services to eligible handicapped individuals.

A regular meeting of the Rehabilitation Committee was held at Woodrow Wilson Rehabilitation Center, Fishersville, on May 1, 1955. In addition to regular Committee members, others present were: R. N. Anderson, Director, Vocational Rehabilitation and Special Education; Drs. John M. Stirewalt, Rachel Weems, J. Treacy O'Hanlan, and F. O. Birdsall, representing Woodrow Wilson Rehabilitation Center; and Corbett Reedy, E. S. Snead, Jr., and Floyd H. Armstrong of the State Rehabilitation Service.

During the meeting several reports were presented on the accomplishments of the Woodrow Wilson Rehabilitation Center in serving an increased number of severely disabled individuals during the past year. Dr. J. Treacy O'Hanlan gave a most interesting discussion, illustrated with slides, on the treatment and care of paraplegic cases with decubiti. The team concerned with the provision of services to amputees at the Center presented a demonstration of the techniques employed in fitting upper extremity prostheses and training in their use.

Dr. Joseph R. Blalock reported on the provision of rehabilitation services to the mentally disabled. While the report revealed substantial progress during the past decade, it pointed up the need for increased rehabilitation services in this field.

Roy M. Hoover, M.D., *Chairman*
George A. Duncan, M.D.
J. R. Blalock, M.D.
LeRoy Smith, M.D.
Frank B. Stafford, M.D.
W. E. Dickerson, M.D.
G. S. Fitz-Hugh, M.D.
Fletcher J. Wright, M.D.
A. L. Carson, Jr., M.D.
Reno Porter, M.D.
Edward E. Haddock, M.D.
A. Ray Dawson, M.D.
Charles L. Savage, M.D.
Benjamin W. Rawles, M.D.

DELEGATES TO 1955 MEETING
THE MEDICAL SOCIETY OF VIRGINIA

Where no name is listed it is indicative that no delegate or alternate was reported.

Delegates	*Alternates*
Accomack	
Dr. Joseph L. DeCormis	Dr. Belle D. Fears
Albemarle	
Dr. H. L. Archer	Dr. C. G. Pearson
Dr. F. Jason Crigler	Dr. M. K. Humphries
Dr. E. C. Drash	Dr. Frank B. Stafford
Dr. M. D. Foster	Dr. E. D. Davis
Dr. J. R. Morris	Dr. J. B. Twyman
Alexandria	
Dr. Charles V. Amole	Dr. John Hoyle
Dr. Ben C. Jones, Jr.	Dr. John Sims
Alleghany-Bath	
Dr. John D. Adams	Dr. H. G. Hudnall
Dr. M. B. Jarman	Dr. S. P. Hileman
Amherst-Nelson	
Dr. Lyddane Miller	Dr. R. H. Laning
Arlington	
Dr. Lloyd B. Burk, Jr.	Dr. Thomas A. McGavin
Dr. J. R. Hutchinson	Dr. John E. Alexander
Dr. K. C. Latven	Dr. W. C. Welburn
Augusta	
Bedford	
Dr. W. V. Rucker	Dr. T. H. Jennings
Botetourt	
Buchanan-Dickenson	
Dr. J. C. Moore	Dr. J. S. Richardson
Dr. T. C. Sutherland	Dr. J. P. Sutherland
Charlotte	
Culpeper	
Dr. C. G. Finney	Dr. J. B. Jones
Danville-Pittsylvania	
Dr. J. R. Eggleston	Dr. Samuel R. Newman
Dr. W. C. Fitzgerald	Dr. G. V. Thompson
Fairfax	
Fauquier	
Dr. James L. Dellinger	Dr. Evan H. Ashby, Jr.
Floyd	

Delegates	*Alternates*
Fourth District	
Dr. W. B. Bishop	
Dr. L. C. Bracey	Dr. Epes Harris
Dr. William P. Ferry	Dr. Ray Moore, Jr.
Dr. H. W. Goode, Jr.	Dr. Earl M. Bane
Dr. B. H. Knight	Dr. Maurice Rosenberg
Dr. R. B. McEwen	
Dr. C. G. O'Brien	Dr. J. M. Habel
Dr. James O'Neal	Dr. R. C. Allison
Dr. Wayne M. Phipps	Dr. Gordon F. Cavell
Dr. Charles Scott	
Dr. Peter Squire	Dr. P. C. Yerby, III
Dr. H. E. Whaley	Dr. Meade Edmunds
Dr. Fletcher J. Wright, Jr.	Dr. H. H. Bracey
Fredericksburg	
Dr. L. A. Busch, Sr.	Dr. W. H. Johnson
Dr. J. C. MacKnight	Dr. G. A. Reynolds
Halifax	
Hampton	
Hanover	
Dr. John D. Hamner, Jr.	Dr. Judson T. Vaughan
James River	
Dr. W. A. Pennington	Dr. Garland Dyches
Dr. J. H. Yeatman	Dr. A. C. Whitley
Dr. E. B. Nuchols	
Lee	
Dr. G. B. Setzler	Dr. T. S. Ely
Loudoun	
Louisa	
Lynchburg	
Dr. H. H. Hurt	Dr. Donald Shotton
Dr. Harold L. Riley	Dr. William Barney
Dr. Joseph E. Warren	Dr. Robert L. Morrison
Mid-Tidewater	
Dr. H. P. Bailey	
Dr. R. B. Bowles	Dr. J. R. Gill
Dr. C. A. Broaddus	
Dr. Joseph W. Chinn	Dr. J. M. Gouldin
Dr. W. H. Hosfield	
Dr. J. R. Parker	Dr. A. W. Lewis, Jr.
Dr. Thomas Smith	Dr. Raymond Brown
Dr. A. L. Van Name	Dr. T. L. Grove

Delegates	*Alternates*
Norfolk	
Dr. Mallory S. Andrews	Dr. Arthur Kirk
Dr. George H. Carr, Jr.	Dr. Brock D. Jones
Dr. John A. Cocke	Dr. H. C. Meredith, Jr.
Dr. Russell M. Cox	Dr. M. Kirwan King
Dr. Bernard I. Lidman	Dr. Mason C. Andrews
Dr. W. Callier Salley	Dr. George P. Hand
Dr. W. H. Whitmore	Dr. J. Franklin Waddill
Northampton	
Northern Neck	
Dr. Leonard D. Booker	Dr. Martel Dailey
Dr. C. Y. Griffith	Dr. Horace E. Kerr
Dr. Paul C. Pearson	Dr. Harold E. Sisson
Dr. S. D. Stoddard	Dr. Lee S. Liggan
Northern Virginia	
Dr. J. R. Holsinger	Dr. M. J. W. White
Dr. Pierce Maccubbin	Dr. George Murphy
Dr. Dennis McCarty	Dr. Elizabeth Sherman
Dr. Harold Miller	Dr. Frank Gearing, Jr.
Dr. John P. Snead	Dr. Chester Riley
Dr. Frank Tappan	Dr. Thomas Iden
Orange	
Patrick-Henry	
Dr. H. M. Price	Dr. J. H. Irby
Dr. W. N. Thompson	Dr. C. P. Sherman
Princess Anne	
Dr. Ira Hancock	Dr. Robert Venner
Richmond Academy	
Dr. W. L. Ball	Dr. F. E. Oglesby
Dr. Richard N. Baylor	Dr. E. L. Kendig, Jr.
Dr. R. D. Butterworth	Dr. J. R. Massie, Jr.
Dr. Donald S. Daniel	Dr. Carl Meador
Dr. William R. Jordan	Dr. Virgil May
Dr. Herbert G. Langford	Dr. William A. Young
Dr. Richard A. Michaux	Dr. Albert A. Edmonds
Dr. Thos. W. Murrell, Jr.	Dr. Gilman R. Tyler
Dr. Kinloch Nelson	Dr. D. Coleman Booker
Dr. M. M. Pinckney	Dr. A. G. Brown, III
Dr. Benj. W. Rawles, Jr.	Dr. William R. Hill
Dr. Adney K. Sutphin	Dr. Wellford C. Reed
Dr. W. T. Thompson, Jr.	Dr. John P. Lynch
Dr. Elam C. Toone, Jr.	Dr. Leslie Rose

Delegates	*Alternates*
Roanoke Academy	
Dr. Allen Barker	Dr. Horace A. Albertson
Dr. George S. Bourne	Dr. Houston L. Bell
Dr. Hugh J. Hagan, Sr.	Dr. Paul Harris
Dr. Robert S. Hutcheson	Dr. William F. Hatcher
Dr. M. A. Johnson, III	Dr. C. D. Nofsinger
Dr. Hugh H. Trout, Jr.	Dr. Charles H. Peterson
Rockbridge	
Dr. L. A. Micou	Dr. E. V. Brush
Rockingham	
Russell	
Dr. W. C. Elliott	Dr. R. W. Jessee
Scott	
Southwestern Virginia	
Dr. E. P. Ambrose	Dr. J. T. Showalter
Dr. E. L. Bagby	Dr. S. A. Tuck
Dr. R. D. Campbell	Dr. J. J. Eller
Dr. W. R. Chitwood	Dr. S. W. Huddle
Dr. J. Glenn Cox	Dr. W. A. Porter
Dr. Virgil J. Cox	Dr. Joseph Coates
Dr. W. F. Delp	Dr. Charles G. Fox, Jr.
Dr. G. B. Kegley	Dr. Rufus Brittain
Dr. S. E. Miller	Dr. R. S. LeGarde
Tazewell	
Dr. Mary Eliz. Johnston	
Tri-County	
Dr. John Murray	Dr. Henry Gardner
Dr. Charles Rawls	Dr. E. C. Joyner
Dr. Lawrence Stetson	Dr. George Carroll
Dr. Hugh Warren	Dr. Hugh Fraser
Warwick-Newport News	
Dr. Russell Buxton	Dr. F. N. Thompson
Dr. W. A. Read	Dr. E. B. Mewborne
Dr. Edward Siegel	Dr. Frank Beazlie
Williamsburg-James City	
Dr. Ben T. Painter	Dr. Joseph E. Barrett
Wise	
Dr. J. T. Phillips	Dr. Francis S. Jones

Presidents of The Medical Society of Virginia

President	Year of Meeting
*Dr. James McClurg, Richmond	1821
*Dr. William Foushee, Richmond	1822
*Dr. William Foushee, Richmond	1823
*Dr. James Henderson, Richmond	1824
Meetings Discontinued.	
*Dr. Robert William Haxall, Richmond	1841
*Dr. Robert William Haxall, Richmond	1842
*Dr. Frederick Marx, Richmond	1843
*Dr. Thomas Nelson, Richmond	1844
*Dr. William A. Patteson, Richmond	1845
*Dr. William A. Patteson, Richmond	1846
*Dr. John A. Cunningham, Richmond	1847
*Dr. William A. Patteson, Richmond	1848
	1849
*Dr. Robert William Haxall, Richmond	1850
*Dr. Beverley R. Wellford, Fredericksburg	1851
*Dr. James Beale, Richmond	1852
*Dr. Thomas P. Atkinson, Danville	1853
*Dr. Carter P. Johnson, Richmond	1854
*Dr. H. C. Worsham, Dinwiddie	1855
*Dr. H. C. Worsham, Dinwiddie	1856
*Dr. James Bolton, Richmond	1857
*Dr. Levin S. Joynes, Richmond	1858
Meetings Discontinued	
*Dr. R. S. Payne, Lynchburg	1870
*Dr. R. S. Payne, Lynchburg	1871
*Dr. A. M. Fauntleroy, Staunton	1872
*Dr. Harvey Black, Blacksburg	1873
*Dr. A. G. Tebault, London Bridge	1874
*Dr. S. C. Gleaves, Wytheville	1875
*Dr. F. D. Cunningham, Richmond	1876
*Dr. J. L. Cabell, University	1877
*Dr. J. H. Claiborne, Petersburg	1878
*Dr. L. S. Joynes, Richmond	1879
*Dr. Henry Latham, Lynchburg	1880
*Dr. Hunter McGuire, Richmond	1881
*Dr. G. W. Semple, Hampton	1882
*Dr. W. D. Cooper, Morrisville	1883
*Dr. J. E. Chancellor, Charlottesville	1884
*Dr. S. K. Jackson, Norfolk	1885
*Dr. Rawley W. Martin, Chatham	1886
*Dr. Bedford Brown, Alexandria	1887
*Dr. Benjamin Blackford, Lynchburg	1888
*Dr. E. W. Row, Orange C. H.	1889
*Dr. Oscar Wiley, Salem	1890
*Dr. W. W. Parker, Richmond	1891
*Dr. H. Grey Latham, Lynchburg	1892
*Dr. Herbert M. Nash, Norfolk	1893
*Dr. Wm. P. McGuire, Winchester	1894
*Dr. Robt. J. Preston, Abingdon	1895
*Dr. Wm. L. Robinson, Danville	1896
*Dr. Geo. Ben Johnston, Richmond	1897
*Dr. Lewis E. Harvie, Danville	1898
*Dr. Jacob Michaux, Richmond	1899
*Dr. Hugh T. Nelson, Charlottesville	1900
*Dr. J. R. Gildersleeve, Tazewell	1901
*Dr. R. S. Martin, Stuart	1902
*Dr. J. N. Upshur, Richmond	1903
*Dr. Joseph A. Gale, Roanoke	1904
*Dr. Wm. S. Christian, Urbanna	1905
*Dr. Lomax Gwathmey, Norfolk	1906
*Dr. Paul B. Barringer, Charlottesville	1907
*Dr. Wm. F. Drewry, Petersburg	1908
*Dr. Stuart McGuire, Richmond	1909
*Dr. E. T. Brady, Abingdon	1910
*Dr. O. C. Wright, Jarratt	1911
*Dr. Hugh M. Taylor, Richmond	1912
*Dr. Southgate Leigh, Norfolk	1913
*Dr. Stephen Harnsberger, Catlett	1914
*Dr. Samuel Lile, Lynchburg	1915
*Dr. Joseph A. White, Richmond	1916
*Dr. Geo. A. Stover, South Boston	1917
*Dr. Ennion G. Williams, Richmond	1918†
*Dr. Ennion G. Williams, Richmond	1919
*Dr. Paulus A. Irving, Farmville	1920
*Dr. Alfred L. Gray, Richmond	1921
*Dr. E. C. S. Taliaferro, Norfolk	1922
*Dr. John Staige Davis, University	1923
*Dr. W. W. Chaffin, Pulaski	1924
*Dr. Hunter H. McGuire, Winchester	1925
Dr. W. L. Harris, Norfolk	1926
*Dr. J. Shelton Horsley, Richmond	1927
*Dr. J. W. Preston, Roanoke	1928
*Dr. J. Bolling Jones, Petersburg	1929
*Dr. Charles R. Grandy, Norfolk	1930
*Dr. J. Allison Hodges, Richmond	1931
*Dr. I. C. Harrison, Danville	1932
*Dr. J. C. Flippin, University	1933
*Dr. R. D. Bates, Newtown	1934
*Dr. F. H. Smith, Abingdon	1935
Dr. P. St. L. Moncure, Norfolk	1936
Dr. J. M. Hutcheson, Richmond	1937
*Dr. G. F. Simpson, Purcellville	1938
Dr. A. F. Robertson, Jr., Staunton	1939
*Dr. H. H. Trout, Roanoke	1940
Dr. W. B. Martin, Norfolk	1941
*Dr. Roshier W. Miller, Richmond	1942
Dr. J. M. Emmett, Clifton Forge	1943
*Dr. C. B. Bowyer, Stonega	1944
Dr. H. B. Mulholland, Charlottesville	1945
*Dr. Julian L. Rawls, Norfolk	1946
*Dr. W. L. Powell, Roanoke	1947
Dr. Guy R. Fisher, Staunton	1948
*Dr. M. Pierce Rucker, Richmond	1949
Dr. W. C. Caudill, Pearisburg	1950
Dr. C. Lydon Harrell, Norfolk	1951
Dr. John T. T. Hundley, Lynchburg	1952
Dr. James L. Hamner, Mannboro	1953
Dr. V. W. Archer, Charlottesville	1954
Dr. Carrington Williams, Richmond	1955

*Deceased.

†Owing to influenza epidemic during World War I, the council met in 1918, and Dr. Williams was continued as President

President's Message . . . .

THE Medical Society of Virginia over many years has served the profession and through the doctors has been an important factor in the development of the State. Along with many similar societies it has grown from a rather simple to a complex organization. It seems to me that we have kept a balance here far better than most state societies. We have an excellent journal, its articles are good, the news columns and reports are interesting and its form is very attractive. Our headquarters provides offices and work space quite adequate to our needs and capable of expansion if necessary.

More important than these things, however, is the fine spirit of the society and the devoted service of so many of its members. The work of the society is done by various committees. These groups are the backbone of our activities and the results of their work are evident.

In many states this expansion has gone much too far, these societies have very large budgets which provide excessive money for this and that. Their offices are imposing and full of expensive personnel. They have gone overboard on Public Relations and many other activities. Like the federal government they seem to think that expanded facilities and enormous budgets can cure all evils. We have kept our feet on the ground and have given our doctors and the public adequate service and leadership without the development of an expensive bureaucracy. We are fortunate indeed in our fulltime personnel and those who have preceded them.

I take this opportunity to thank all of our staff and all of our members for their jobs well done and to express my deep appreciation of the opportunity to be of service to the society, and the great honor to be its President.

Carrington Williams

President

Editorial....

Pemphigus

THE name pemphigus is derived from a Greek word meaning blister. The term was formerly applied to every disease of the skin presenting bullae. As knowledge has increased, the group has been substantially reduced but the problem not yet entirely settled. Certain types of erythema multiforme and dermatitis herpetiformis are difficult to distinguish from pemphigus and many conflicting statements are encountered on this account. Recent histopathologic and cytologic studies of the bullae are helping to separate true pemphigus from many imitators.

The concept of pemphigus has developed gradually. One definition is that of a chronic disease of the skin, occurring in several phases, characterized by bullae which develop in cycles or in continuous succession and accompanied by constitutional symptoms. Two types of true pemphigus exist: pemphigus vulgaris and pemphigus foliaceus. Other conditions seem to represent either a variant or a different disease according to the dermatopathologists. Histologic examination of a blister is of great importance for the differential diagnosis of pemphigus from other bullous diseases.

In true pemphigus vulgaris the bullae on the skin are often flaccid from the beginning but they may be tense at first and quickly become flaccid as they increase in size. They usually arise on skin which appears normal but sometimes appear on an erythematous base. The blisters break easily and for this reason rarely become large. The denuded areas which form at the site of the broken bullae tend to increase in size as the epidermis detaches itself at their periphery. In advanced cases, often no bullae form and the epidermis merely slides off. Thus, large denuded areas are the outstanding clinical feature of pemphigus vulgaris. The denuded areas, as a rule, show little tendency to healing and usually, progression is faster than healing. Older denuded areas frequently are covered with hemorrhagic crusts. They heal without scarring, although hyperpigmentation often remains at the site. Itching is not a constant feature. At times it may be present when crops of new bullae erupt. However, the pain caused by the extensive denudation is severe and results in considerable suffering to the patient.

In patients with pemphigus vulgaris, pressure with a finger often causes the epidermis to slide off even in areas in which the skin still has a normal appearance. This is the so-called Nikolsky sign and can be elicited in other bullous diseases also. There is no rule to the distribution of the cutaneous lesions. Since, however, pressure leads to detachment of the epidermis, areas exposed to pressure and friction, such as the back, the hands and feet, often show extensive involvement.

The mucous membranes of the mouth are involved in nearly all patients and in more than half of the patients the mouth is the site of the initial lesion. This is an important diagnosic aid. The oral involvement is usually severe and characterized by denudation. These lesions are painful and cause difficulty with mastication and swallowing. Other mucous membranes may be involved also.

As mentioned previously, there are several variations of the clinical picture just described. One of these is pemphigus vegetans which represents a reactive phase of the patient with pemphigus vulgaris, in the direction of increased resistance to the disease. Whereas, in pemphigus vulgaris the denuded areas show only a slight tendency to heal and if they heal, heal with a normal epidermis, many of the denuded areas in pemphigus vegetans develop hypertrophic granulations, so-called vegetations.

"Ocular" pemphigus is a special form of the disease and, according to recent histological evidence, does not really belong in the pemphigus group. The outstanding

features of this disease are the predilection of the lesions for the mucous membranes, particularly the conjunctival and oral mucosa, the tendency of the lesions to produce scarring, and the benign, chronic course of the disease.

Pemphigus foliaceus is generally regarded as one of the two forms of true pemphigus rather than a variation of pemphigus vulgaris. It differs from the latter in that the exfoliation is superficial, leading to areas of erosion without denudation, whereas in pemphigus vulgaris the exfoliation is characterzed by a separation of almost the entire thickness of the epidermis resulting in areas of actual denudation.

The internal organs of patients who have died of pemphigus show no constant pathologic changes. The specific lesion of the disease, the bulla, occurs only on the skin and the mucous membranes of the body orifices. The changes that are encountered occasionally are nonspecific and the conclusion seems justified that death is due to metabolic alterations.

Pemphigus vulgaris and pemphigus foliaceus cause considerable changes in the concentration of proteins and electrolytes in the blood plasma; in the volume of plasma and interstitial fluid; in the number of erythrocytes; and in the differential count of the leukocytes. Severe anemia and hypoalbuminemia may develop as the disease advances. The concentration of albumin in the blood serum, determined by electrophoresis, may decrease to one-fourth of the normal value. The amounts of sodium, chloride and calcium in the blood serum are reduced, often to a considerable extent; while the amount of potassium may be increased. The plasma volume and the interstitial fluid volume are greatly increased in the advanced stages of the disease. The total white count tends to be moderately elevated with an increase in the proportion of immature neutrophils. The percentage of eosinophils is moderately increased in many patients.

For the differential diagnosis of pemphigus from other diseases, histologic examination is of great importance. As indicated in the opening paragraph, experts have been able to differentiate the lesions of true pemphigus from other bullous diseases by a careful microscopic examination of the characteristics of the blister.

The cause of pemphigus is unknown. Numerous theories have been advanced, including many attempts to isolate a microorganism, but none have been conclusive.

Of all the intensive study to which pemphigus has been subjected, the most important advance has been the introduction of corticotropin and cortisone into the treatment of this puzzling disease. These hormones represent an effective treatment since they suppress the clinical manifestations. It is significant that some patients with pemphigus have now been maintained for five years on these drugs. Although their use entails some risk, in patients with a hopeless disease some risk is worth taking. Successful control of a case of pemphigus with a new derivative, metacortandracin, has recently been reported with no serious side effects for a brief period of time. However, the administration of large doses resulted in a negative nitrogen balance and it may be expected that such doses, if long continued, would ultimately be associated with demineralization and osteoporosis.

The prognosis of pemphigus is very grave. Unless treatment with corticotropin, cortisone or one of the newer derivatives is administered, the patient almost invariably dies of the disease. It is not yet known if pemphigus is a self-limited disease but if his is proven, then the treatment with these preparations would represent not merely a palliative but actually a life-saving measure.

CARL S. LINGAMFELTER, M.D.

News . . . .

Calendar of Coming Events

Academy of Psychosomatic Medicine—Plaza Hotel, New York, N. Y., October 6-8.
The Medical Society of Virginia—Hotel Jefferson, Richmond, October 16-19.
American College of Gastroenterology—The Shoreland, Chicago, Illinois, October 24-26.
Southern Medical Association—Houston, Texas, Shamrock Hotel, November 14-17
American Association of Blood Banks—Palmer House, Chicago, Illinois, November 19-21
National Society for Crippled Children and Adults—Palmer House, Chicago, Illinois, November 19-21
American Medical Association Clinical Meeting—Boston, Massachusetts, November 29-December 2.
Virginia Society of Ophthalmology and Otolaryngology—Medical College of Virginia, Richmond, November 29-December 2.

Dr. Thomas H. Jennings

Has been named chairman of the Recruitment Committee of the Red Cross Blood Program of Bedford County.

Dr. George R. Minor

Associate professor of surgery at the University of Virginia, School of Medicine, has been awarded a $3,000 grant by the Virginia Heart Association in support of the cardio-vascular research which he and some of his associates are now conducting. An effort is being made to find a suitable substitute for human arterial grafts to replace damaged or diseased large arteries.

Dr. C. O. Finne,

Saltville, has been named president of the newly organized Mountaineer Sportsmen's Association.

Dr. Ramsey Honored.

The dedication of the Ramsey Memorial Medical Center at Gretna was held on August 14th. This was built as a memorial to Dr. Oscar Lee Ramsey, Sr., who practiced there for forty-seven years before his death in 1953. The Center has facilities and equipment set up for two physicians and a dentist.

The Southern Medical Association

Will hold its 49th Annual Meeting in Houston, Texas, November 14-17, under the presidency of Dr. Robert L. Sanders of Memphis, Tennessee. The Scientific Assembly will feature some 300 papers by outstanding researchers and practitioners in all the major medical and surgical fields. All of these sessions will be held in the various meeting rooms of the Shamrock Hotel. More than 200 technical and scientific exhibits will be readily accessible to the meeting rooms.

Reservations may be made through the Housing Bureau, Box 1267, Houston, Texas.

A Journal for Resident Physicians.

Dr. Perrin H. Long, New York, has been named Editor-in-Chief, of a new journal "Resident Physician" which made its bow with the September issue. The editorial content will consist of orginal articles geared especially to residents' educational, economic and personal problems within and outside the hospital. Its main aim is to make a resident a better house officer.

Editorial Department of his journal is located at 676 Northern Blvd., Great Neck, N. Y.

Dr. Frances A. Hellebrandt

Has retired as head of the department of Physical Medicine and Rehabilitation of the University of Illinois College of Medicine. She will live in Athens, Ohio, where she will devote full time to historical research and scientific writing. Dr. Hellebrandt was at one time director of the Baruch Center of Physical Medicine at the Medical College of Virginia.

Fiske Fund Prize.

The trustees of the Caleb Fiske Prize of the Rhode Island Medical Society announce the subject for

this year's dissertation as "Use of Radio-Active Isotopes in the Treatment and Investigation of Disease". This should be typewritten, double spaced, and should not exceed 10,000 words. A cash prize of $350.00 is offered.

For complete information write to the Secretary, Caleb Fiske Fund, Rhode Island Medical Society, 106 Francis Street, Providence 3, R. I.

The Gill Memorial Eye, Ear and Throat Hospital,

Roanoke, will hold its 29th Annual Spring Congress in Ophthalmology, Otolaryngology and Allied Specialties, April 2-7, 1956.

Among the guest speakers are the following: Drs. Rudolph Aebli, New York; Sam Blank, Philadelphia; John E. Bordley, Baltimore; Virgil S. Casten, Boston; Jack S. Guyton, Detroit; Bayard T. Horton, Rochester, Minn.; Curwood J. Hunter, Cincinnati; John R. Lindsay, Chicago; John E. Magielski, Ann Arbor; Stephen J. H. Miller, London, England; Peter N. Pastore, Richmond; Herbert J. Rinkel, Kansas City; C. Dwight Townes, Louisville; Everett R. Veirs, Temple, Tex.; and Henry P. Wagener, Rochester, Minn.

Farm/City Week.

Each physician and his medical society is invited to plan and participate actively in Farm/City Week, October 23-29, a week-long series of events aimed at bringing about better understanding between rural and urban dwellers.

Under the sponsorship of the Farm-City Conference, an informal alliance of leaders in industry, agriculture, and the professions, Farm/City Week is hoped to be one of the most effective ventures in good citizenship ever undertaken. Member organizations, representing several million people, are going "all out" to make the Week national in scope through observances in every community across the country.

The AMA, a Conference member, has already sent program plans and suggestions to all medical society officers. Kiwanis International has been selected as the coordinating agency, and local Kiwanis club officers have been advised of your invitation to participate in state and community programs.

Because Farm/City Week provides a splendid opportunity for the medical society to assert its civic leadership and to inform the public of its many services, the AMA urges all physicians and societies to get behind this program to help dramatize the mutual need for good relationships between town and country neighbors.

Health and medical care are of uppermost interest in this activity dedicated to urban and rural progress. Medical societies can add greatly to the success of the Week by developing health programs for city and farm groups, addressing civic organizations, participating in newspaper, radio and TV interviews, providing tours of medical facilities, and presenting vocational guidance programs in secondary schools. In addition, physicians, as members of the community, should be represented in the general observances of Farm/City Week.

Specifically, your community is probably vitally interested in: child welfare, budgeting for medical expenses, sanitation, mental health, nutrition, obtaining physicians in rural areas, health programs of the land grant universities, health education among youth groups, animal diseases related to man, and the effect of soils on human and animal nutrition. These and other programs initiated by your society will add immeasurably to the final success of this first Farm/City Week.

A successful Farm/City Week, October 23-29, depends upon community-wide action. The medical profession—both as individual members and as a professional unit—should accept this challenge.

For Rent.

Doctor's office. Three doors west of the Lee Medical Building, Richmond. Will remodel to suit doctor. Write "Office", care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

For Sale.

Suburban properties, homes and timberlands, located in the vicinity of Richmond and Hopewell. Sound investment opportunities. Call or write: W. L. Broaddus, phone 844, P. O. Box 479, Hopewell, Va. (*Adv.*)

Wanted.

General surgeon for part-time work in clinic group located near Richmond; also a physician to do general practice and, if desired, learn and do some general surgery and EENT. Reply stating pertinent information to #45, % Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Doctors' Offices Available.

Doctor's office available in very busy, large apartment community of 10,000 with an immediate surrounding area of 20,000 more. An internist or general practitioner preferable. Buckingham Community, 313 N. Glebe Rd., Arlington 3, Va. (*Adv.*)

Obituaries . . . .

Dr. Ernest T. Trice,

Prominent Richmond surgeon, died September 7th, having been in ill health for about a year. He was a native of Petersburg and sixty-seven years of age. Dr. Trice received his degree from the former University College of Medicine, Richmond, in 1911. He was a member of the staffs of the Medical College of Virginia and Grace Hospitals and he was a pioneer in Richmond in the use of early ambulation following surgery. Dr. Trice served during World War II as a lieutenant-colonel in the Medical Corps, attached to the State Selective Service Board as surgeon of the staff. He had served on the State Prison Board for the terms of 1937 and 1939. Dr. Trice had been a member of The Medical Society of Virginia since 1913. His wife and two sons, Drs. Robert P. and Ernest R., survive him.

Dr. Joseph Barkley Lacy,

Nathalie, died August 13th, after a long illness. He was eighty-three years of age and graduated from the Medical College of Virginia in 1905. Dr. Lacy had practiced in Halifax County for more than forty years before his retirement. He was a former president of the Piedmont Medical Society and had been a member of The Medical Society of Virginia for fifty years. Dr. Lacy was a Mason and a member of the Woodmen of the World. A sister survives him.

Dr. Coleman Douglas Bennett,

Chatham, died August 19th, at the age of eighty-two. He was a native of Pittsylvania County and a graduate of the Medical College of Virginia in 1905. Dr. Bennett had practiced in Pittsylvania County since his graduation, locating at Chatham in 1911. He was a past president of the Danville-Pittsylvania Academy of Medicine and had been a member of The Medical Society of Virginia since 1905. Dr. Bennett served with the U. S. Navy Medical Corps during World War I. His wife and a son survive him.

Dr. Roger Lee Creekmur,

Well known physician of Richmond, died September 3rd, at the age of fifty-nine. He was a graduate of the Medical College of Virginia in 1921 and had practiced in Richmond since that time. Dr. Creekmur was physician and surgeon of the Richmond Fire Bureau, having served for seventeen years. He had been a member of The Medical Society of Virginia for thirty-three years. His wife survives him.

Dr. Oscar Richard Fletcher,

Sanford, died June 14th, following a stroke. He was seventy-two years of age and received his medical degree from the University of Maryland in 1908. Dr. Fletcher had practiced in Sanford since his graduation and two years ago the people of his section paid homage to him, presenting him with a diamond-studded Masonic ring. He had served as a member and secretary of the County Board of Health and was president of the board of the National Hallwood Bank. Dr. Fletcher had been a member of The Medical Society of Virginia for forty-two years. His wife survives him.

Dr. John Alexander Wright, Sr.,

Doswell, died September 1st. He was seventy-nine years of age and graduated from the University College of Medicine, Richmond, in 1898. Dr. Wright had practiced in Hanover and Caroline Counties since his graduation. He was for a number of years local surgeon for the C. & O. Railway. Dr. Wright was formerly a member of The Medical Society of Virginia. His wife, four daughters and two sons survive him. A son is Dr. Wright, Jr., also of Doswell.

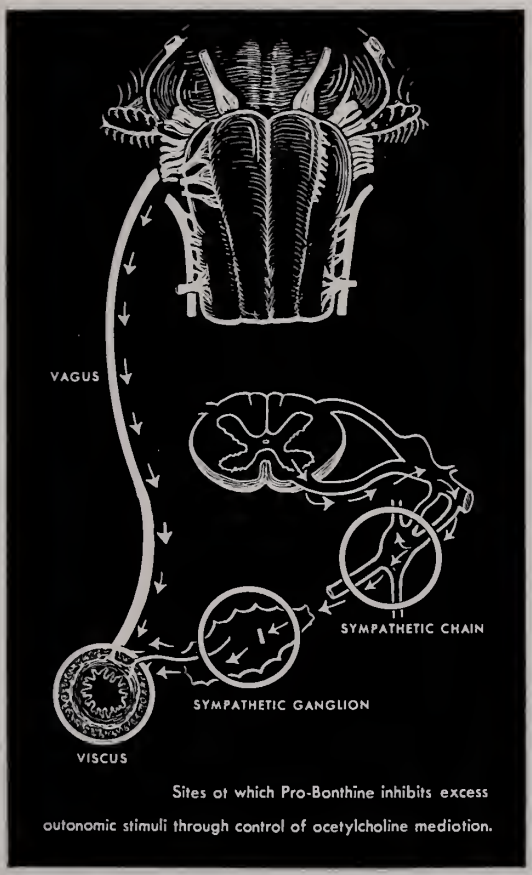
PRO-BANTHĪNE® FOR ANTICHOLINERGIC ACTION

A Combined Neuro-Effector and Ganglion Inhibitor

Pro-Banthine consistently controls gastrointestinal hypermotility and spasm and the attendant symptoms.

Pro-Banthine is an improved anticholinergic compound. Its unique pharmacologic properties are a decided advance in the control of the most common symptoms of smooth muscle spasm in all segments of the gastrointestinal tract.

By controlling excess motility of the gastrointestinal tract, Pro-Banthine has found wide use[1] in the treatment of peptic ulcer, functional diarrheas, regional enteritis and ulcerative colitis. It is also valuable in the treatment of pylorospasm and spasm of the sphincter of Oddi.



Sites of which Pro-Banthine inhibits excess autonomic stimuli through control of acetylcholine mediation.

Roback and Beal[2] found that Pro-Banthine orally was an "inhibitor of spontaneous and histamine-stimulated gastric secretion" which "resulted in marked and prolonged inhibition of the motility of the stomach, jejunum, and colon. . . ."

Therapy with Pro-Banthine is remarkably free from reactions associated with parasympathetic inhibition. Dryness of the mouth and blurred vision are much less common with Pro-Banthine than with other potent anticholinergic agents.

In Roback and Beal's[2] series "Side effects were almost entirely absent in single doses of 30 or 40 mg. . . ."

Pro-Banthine (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is available in three dosage forms: sugar-coated tablets of 15 mg.; sugar-coated tablets of 15 mg. of Pro-Banthine with 15 mg. of phenobarbital, for use when anxiety and tension are complicating factors; ampuls of 30 mg., for more rapid effects and in instances when oral medication is impractical or impossible.

For the average patient one tablet of Pro-Banthine (15 mg.) with each meal and two tablets (30 mg.) at bedtime will be adequate. G. D. Searle & Co., Research in the Service of Medicine.

---

1. Schwartz I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: Gastroenterology *25*:416 (Nov.) 1953.

2. Roback, R. A., and Beal, J. M.: Gastroenterology *25*:24 (Sept.) 1953.

SEARLE

SAINT ALBANS

A PRIVATE PSYCHIATRIC HOSPITAL

RADFORD, VIRGINIA



STAFF

James P. King, M. D., Director

James K. Morrow, M. D. Thomas E. Painter, M. D. Daniel D. Chiles, M. D.

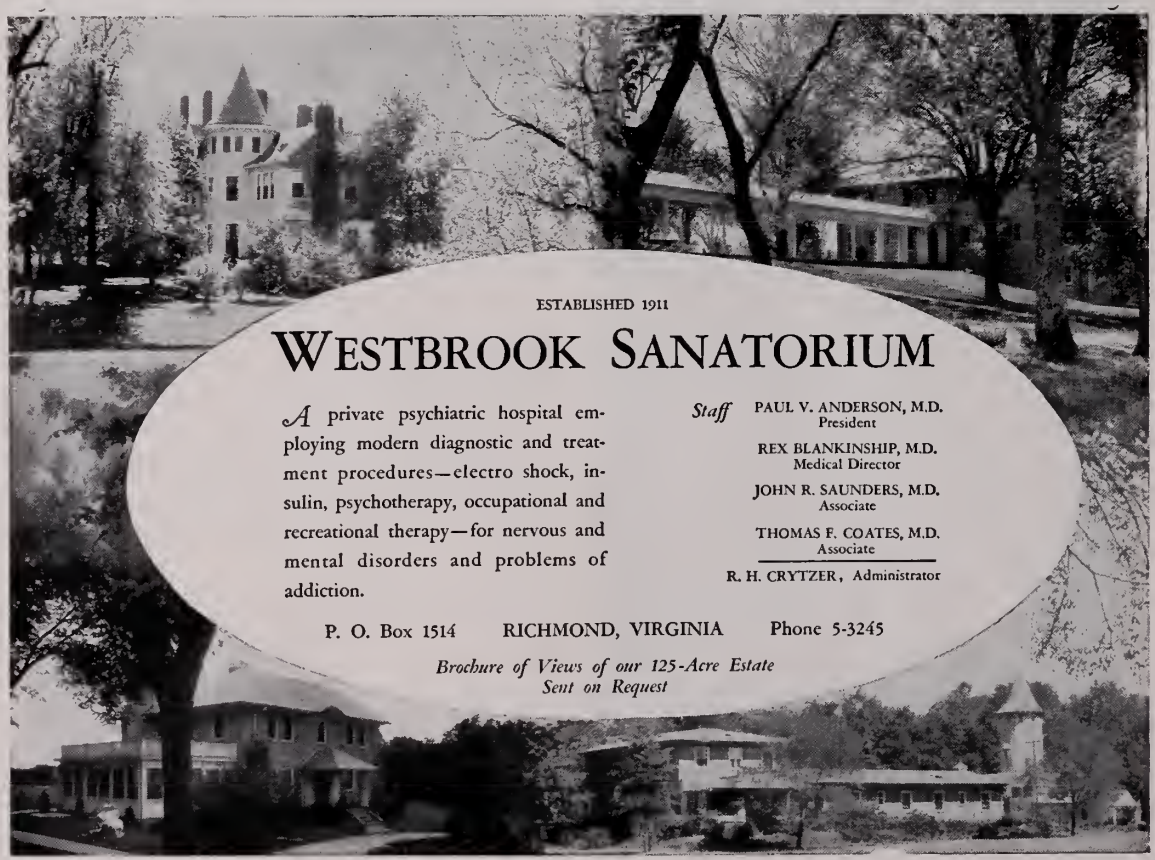
James L. Chitwood, M. D., Medical Consultant

Affiliated Clinic Offering Psychiatric and Psychological Evaluation and Therapy:

BLUEFIELD MENTAL HEALTH CENTER

1400 B'and Street **Bluefield, W. Va.**

David M. Wayne, M. D., Director



ESTABLISHED 1911

WESTBROOK SANATORIUM

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

Staff

PAUL V. ANDERSON, M.D.
President

REX BLANKINSHIP, M.D.
Medical Director

JOHN R. SAUNDERS, M.D.
Associate

THOMAS F. COATES, M.D.
Associate

R. H. CRYTZER, Administrator

P. O. Box 1514 RICHMOND, VIRGINIA Phone 5-3245

Brochure of Views of our 125-Acre Estate
Sent on Request

Upjohn
KALAMAZOO

Indicated wherever oral cortisone or hydrocortisone is effective. Available in 5 mg. tablets in bottles of 30 and 100. Usual dosage is ½ to 1 tablet three or four times daily

Deltasone*

Less sodium retention, less potassium depletion

*Trademark for the Upjohn brand of prednisone (delta-1-cortisone)

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

Medical College of Virginia

HOSPITAL DIVISION

RICHMOND, VIRGINIA

A health center using the latest methods of diagnosis and treatment of disease.

MEDICAL COLLEGE OF VIRGINIA HOSPITAL
OUT-PATIENT DEPARTMENT
SAINT PHILIP HOSPITAL
DOOLEY HOSPITAL

The patient's welfare is our primary interest.

C. P. CARDWELL, JR., *Director*

A Modern Hospital for the Treatment of Alcoholism Exclusively

- A private hospital offering scientific, institutional, medical, psychological, reflex, reduction and other methods for the rehabilitation of consent patients suffering from alcoholism.

- All equipment modern with facilities to take care of 50 patients both male and female.

- Under the direction of a competent licensed M. D. with five consultant physicians subject to call. Registered Nurses in charge 24 hours daily.



Approved and licensed by the Virginia State Hospital Board. Atop beautiful Mt. Regis, five miles West of Roanoke, on Highway 11, in the quiet serene mountains of Virginia, conducive to rest, comfort and recuperation. Doctors inspection invited. For information phone or write.

WHITE CROSS HOSPITAL

Five Miles West of Roanoke on Route No. 11.
Salem, Virginia — Phone Salem 287

WHITE CROSS HOSPITAL

Copyright 1948. H. N. Alford, Atlanta, Ga.

THE
KEELEY
INSTITUTE
447 W. Washington St.
GREENSBORO,
NORTH CAROLINA

Out-Patient Clinic
And Hospital For Rehabilitation Of
The ALCOHOLIC

A. F. Fortune, MD: Medical Director
Ben F. Fortune, MD: Associate Medical Director
R. H. Dovenmuehle, MD: Consultant in Psychiatry

In-patients are accepted in state of acute alcoholism. No waiting period required.

Registered by American Medical Association

GRADE A PASTEURIZED PRODUCTS

GARST BROS. DAIRY INC.
DIAL 5501

GRADE A MILK
HOMOGENIZED MILK (Natural Vitamin D added)
GOLDEN GUERNSEY MILK
GOLDEN FLAKE BUTTERMILK
SKIM MILK—COFFEE CREAM
WHIPPING CREAM—COTTAGE CHEESE
DARI-RICH CHOCOLATE MILK
GARST BROS. DAIRY BUTTER

"ROANOKE'S MOST MODERN DAIRY"

LABORATORY CONTROL
FOR YOUR PROTECTION
DIAL 5502

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets
(PREDNISOLONE, MERCK)
2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

SHARP & DOHME
Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

1950 Cortone® | 1952 Hydrocortone®

1954 'Alflorone' | 1955 'Hydeltra'

DELTRA® tablets

(Prednisone, Merck)

2.5 mg. - 5 mg. (scored)

the delta$_1$ analogue of cortisone

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

Indications:

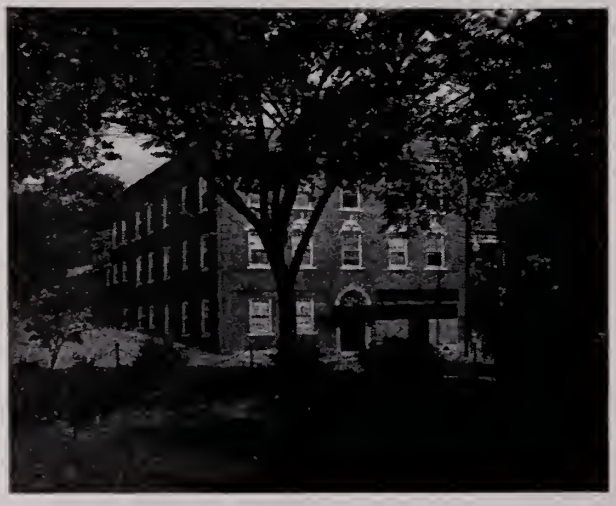
Rheumatoid arthritis

Bronchial asthma

Inflammatory skin conditions

Gill Memorial Eye, Ear and Throat Hospital, Inc.

Roanoke, Virginia



STAFF

ELBYRNE G. GILL, M. D.
HOUSTON L. BELL, M. D.
THOMAS QUILTY, M. D.
DORIS L. JANES, B. S., O. D.
(Orthoptics and Contact Glasses)
S. H. HOLLAND, M. D.
ROBERT B. JONES, JR., M. D.

A Modern, Fireproof Hospital, Specially Designed and Equipped for the Medical and Surgical Care of Ophthalmology, Otolaryngology, Facio-Maxillary Surgery, Bronchoscopy and Esophagoscopy.

Complete Laboratory and X-Ray Equipment.

Physicians and Graduate Nurses in Constant Attendance.

The Hospital offers a residentship of three years to a graduate of an approved medical school, who has had an internship of at least one year in an approved hospital.

For further information, address

BUSINESS MANAGER, BOX 1789, ROANOKE, VIRGINIA

McGUIRE CLINIC
ST. LUKE'S HOSPITAL

RICHMOND, VIRGINIA



General Medicine
HUNTER H. McGUIRE, M.D.
MARGARET NOLTING, M.D.
JOHN P. LYNCH, M.D.
WM. H. HARRIS, JR., M.D.
JOHN B. CATLETT, M.D.
ROBERT W. BEDINGER, M.D.

Orthopedic Surgery
JAMES T. TUCKER, M.D.
BEVERLEY B. CLARY, M.D.
EARNEST B. CARPENTER, M.D.
JAMES B. DALTON, JR., M.D.

Ophthalmology, Otolaryngology
FRANCIS H. LEE, M.D.

General Surgery
WEBSTER P. BARNES, M.D.
JOHN H. REED, JR., M.D.
JOHN ROBERT MASSIE, JR., M.D.
JOSEPH W. COXE III, M.D.

Dental Surgery
JOHN BELL WILLIAMS, D.D.S.

Urology
AUSTIN I. DODSON, M.D.
CHAS. M. NELSON, M.D.
AUSTIN I. DODSON, JR., M.D.

Pediatrics
HUBERT T. DOUGAN, M.D.

Obstetrics
W. HUGHES EVANS, M.D.
W. H. COX, M.D.
JAMES M. WHITFIELD, M.D.

Bronchoscopy
GEORGE AUSTIN WELCHONS, M.D.

Roentgenology
JESSE N. CLORE, JR., M.D.
STUART J. EISENBERG, M.D.

Pathology
J. H. SCHERER, M.D.

Treasurer: RICHARD J. JONES, BS., C.P.A.



Part View of Park Grounds

TERRACE HILL was specifically built for a Nursing Home. Superb 24 hours daily care. Under supervision of a Registered Nurse and Resident Externe. Quiet atmosphere. Trained Dietitian. Accommodates 50 guests Private and semi-private rooms with lavatories. Rates $45.00 to $75.00 weekly for room, board and general nursing care. Your inspection invited.

Professional Nursing Care

TERRACE HILL
Nursing Home, Inc.

"Understanding Care"

2112 MONTEIRO AVE., RICHMOND, VA.



Comfortable Lounges

Around the Clock
NURSING CARE

Convalescents
Chronic Cases
Elderly People



Wide, Long Hallways

Each Guest Under Care of Own Doctor.

Professional care supervised by trained nurse. Doctors orders carefully followed. No parking problem. Regularly inspected by City Health Department. For additional information

Write or Call Superintendent

TERRACE HILL NURSING HOME, Dial 3-3993

RIVERSIDE CONVALESCENT HOME

Sophia & Fauquier Sts. **Fredericksburg, Virginia**



For convalescent, aged, chronically ill, and retired persons. Provides healthful rest, excellent nursing care in cheerful, comfortable surroundings. Air-conditioned, fire-safe building. Accommodations for eighty. Medical Supervision. Inspection Invited. Write, or telephone Essex 3-3434.

Rates:

$35.00 to $75.00 per week

Upjohn
KALAMAZOO

Indicated wherever oral cortisone or hydrocortisone is effective • Available in 5 mg. tablets in bottles of 30 and 100, and in 1 mg. tablets in bottles of 100 Usual dosage is ½ to 1 tablet three or four times daily

Delta-Cortef*

Fewer side effects at effective dosage levels

*Trademark for the Upjohn brand of prednisolone (delta-1-hydrocortisone)

RICHMOND EYE HOSPITAL
RICHMOND EAR, NOSE AND THROAT HOSPITAL
(COMBINED)

RICHMOND, VIRGINIA



A new non-profit Community Hospital specially constructed for the treatment of Eye, Ear, Nose and Throat Diseases, including Laryngeal Surgery, Bronchoscopy and Plastic Surgery of the Nose.

Professional care offered a limited number of charity patients.

ADDRESS: **JULIA WAGNER WATERS, R.N.,** ***Administrator*** **408 North 12th Street**

RIVERSIDE HOSPITAL, Newport News, Va.



A General Hospital (265 beds) with Departments in Medicine, Surgery, Obstetrics, Pathology, Radiology, Pediatrics and Nursing. The Hospital is accredited by the Council on Medical Education of the American Medical Association for training first year interns, residencies in the surgical specialties for one and two years, general practices two years full approval, internal medicine, and obstetrics and gynecology, and the School of Nursing is accredited by the Virginia State Board of Nurse Examiners.

DAVID E. WATSON,
Administrator

MISS ROSE M. DEWEVER, R.N.,
Director, School of Nursing

ST. ELIZABETH'S HOSPITAL

RICHMOND 20, VIRGINIA

STAFF

Guy W. Horsley, M.D.	General Surgery and Gynecology
D. Coleman Booker, M.D.	General Surgery and Gynecology
Austin I. Dodson, M.D.	Urology
Austin I. Dodson, Jr., M.D.	Urology
J. Edward Hill, M.D.	Urology
Douglas G. Chapman, M.D.	Internal Medicine
Eimer S. Robertson, M.D.	Internal Medicine
T. E. Stanley, M.D.	Internal Medicine
Fred M. Hodges, M.D.	Roentgenology
L. O. Snead, M.D.	Roentgenology
Hunter B. Frischkorn, Jr., M.D.	Roentgenology
Helen Lorraine	Medical Illustration

ADMINISTRATION

William Scott — Business Manager

SCHOOL OF NURSING

The School of Nursing is affiliated with The Johns Hopkins Hospital School of Nursing for a three months' course each in Pediatrics and Obstetrics, and with the Tucker's Hospital in Richmond for a 12 weeks course in Psychiatry.

Address: Superintendent of Nurses

MODERN IN EQUIPMENT

MRS. PLYLER'S

KATE E. PLYLER (1876-1947)

Third Decade of Nursing

PROMPTUS ET FIDELIS

OLD IN TRADITION

NURSING HOME

MARY INGRAM CLARK

CONVALESCENT — CHRONIC — AGED

- Equipped for oxygen and transfusions
- 30 special & general nurses
- 24-hour nursing care
- Centrally located
- 50-bed capacity
- Dietician
- Rates from $42.00 to $70.00 per week for room, board and general nursing care.



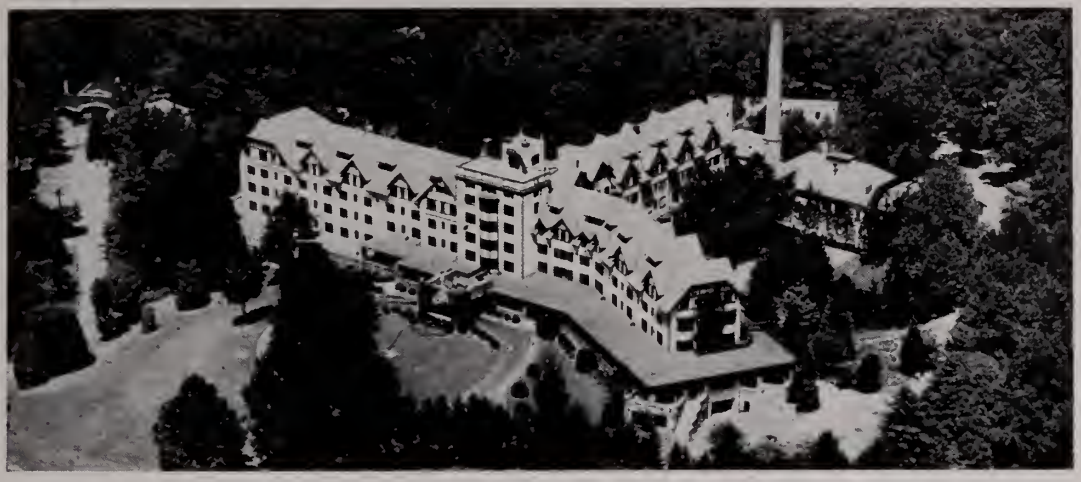


For further information write or call MRS. GENE CLARK REGIRER, Supt.

1613-15-17 Grove Avenue—Richmond, Virginia—Telephone 84-3221

Appalachian Hall • Asheville, North Carolina

ESTABLISHED 1916



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D.
ROBERT A. GRIFFIN, JR., M.D.
MARK A. GRIFFIN, SR., M.D.
MARK A. GRIFFIN, JR., M.D.

For rates and further information write APPALACHIAN HALL, ASHEVILLE, N. C.

STUART CIRCLE HOSPITAL

413-21 STUART CIRCLE
RICHMOND, VIRGINIA

Medicine:
MANFRED CALL, III, M.D.
M. MORRIS PINCKNEY, M.D.
ALEXANDER G. BROWN, III, M.D.
JOHN D. CALL, M.D.
WYNDHAM B. BLANTON, JR., M.D.

Obstetrics and Gynecology:
WM. DURWOOD SUGGS, M.D.
SPOTSWOOD ROBINS, M.D.
EDWIN B. PARKINSON, M.D.

Orthopedics:
BEVERLEY B. CLARY, M.D.

Pediatrics:
CHARLES P. MANGUM, M.D.
EDWARD G. DAVIS, JR., M.D.

Ophthalmology, Otolaryngology:
W. L. MASON, M.D.

Anesthesiology
WILLIAM B. MONCURE, M.D.
HETH OWEN, JR., M.D.

Surgery:
A. STEPHENS GRAHAM, M.D.
CHARLES R. ROBINS, JR., M.D.
CARRINGTON WILLIAMS, M.D.
RICHARD A. MICHAUX, M.D.
CARRINGTON WILLIAMS, JR., M.D.

Urological Surgery:
FRANK POLE, M.D.

Oral Surgery:
GUY R. HARRISON, D.D.S.

Plastic Surgery:
HUNTER S. JACKSON, M.D.

Roentgenology and Radiology:
FRED M. HODGES, M.D.
L. O. SNEAD, M.D.
HUNTER B. FRISCHKORN, JR., M.D.
WILLIAM C. BARR, M.D.

Physiotherapy:
MISS ETHELEEN DALTON

Director:
CHARLES C. HOUGH

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets
(PREDNISOLONE, MERCK) 2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

SHARP & DOHME
Philadelphia 1, Pa.
Division of Merck & Co., Inc.

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

TUCKER HOSPITAL Inc.

212 West Franklin Street,

Richmond, Virginia

A private hospital accepting for diagnosis and treatment organic neurological conditions, selected psychiatric and alcoholic cases, metabolic disturbances of an endocrine nature, individuals who are having difficulty with their personality adjustments, and children with behavior problems. Patients with general medical disorders admitted for treatment under our staff of visiting physicians.

Under the Professional Charge of

Dr. Howard R. Masters, Dr. James Asa Shield
and Associates

The American Way

is peace, prosperity, and goodwill toward our fellow man—to invest our time in educating and learning; and our money in good citizens and fine institutions.



One of the finest institutions of your State is Richmond Hotels Incorporated, one that maintains the highest modern hotel standards . . . one that combines the hospitality and charm of the old and the convenience and comfort of the new.

John Marshall William Byrd
King Carter Richmond

Richmond Hotels Incorporated

For the
Discriminating
Eye Physician

Depend on the Services of a Guild Optician

in
Lynchburg, Virginia

A. G. JEFFERSON

Ground Floor **Allied Arts Bldg.**

Exlusively Optical

The State Board of Medical Examiners of Virginia

The next meeting of the Board will be held at Richmond Hotel, Richmond, Virginia December 6, 1955 and the examinations will be held at the same hotel December 7, 8 and 9. November 21, 1955 is the deadline for receipt of applications for the examination and documents and papers to be discussed and acted upon by the Board. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

At All

DEPENDABLE

PRESCRIPTION SERVICE

and

SERVICE TO PHYSICIANS

PATTERSON'S
SAFE SERVICE DRUG STORES

Prescription Specialists

Lynchburg, Va. **Martinsville, Va.**
Danville, Va. **Altavista, Va.**
Winston-Salem, N. C.

The . . . Thompson Homestead School

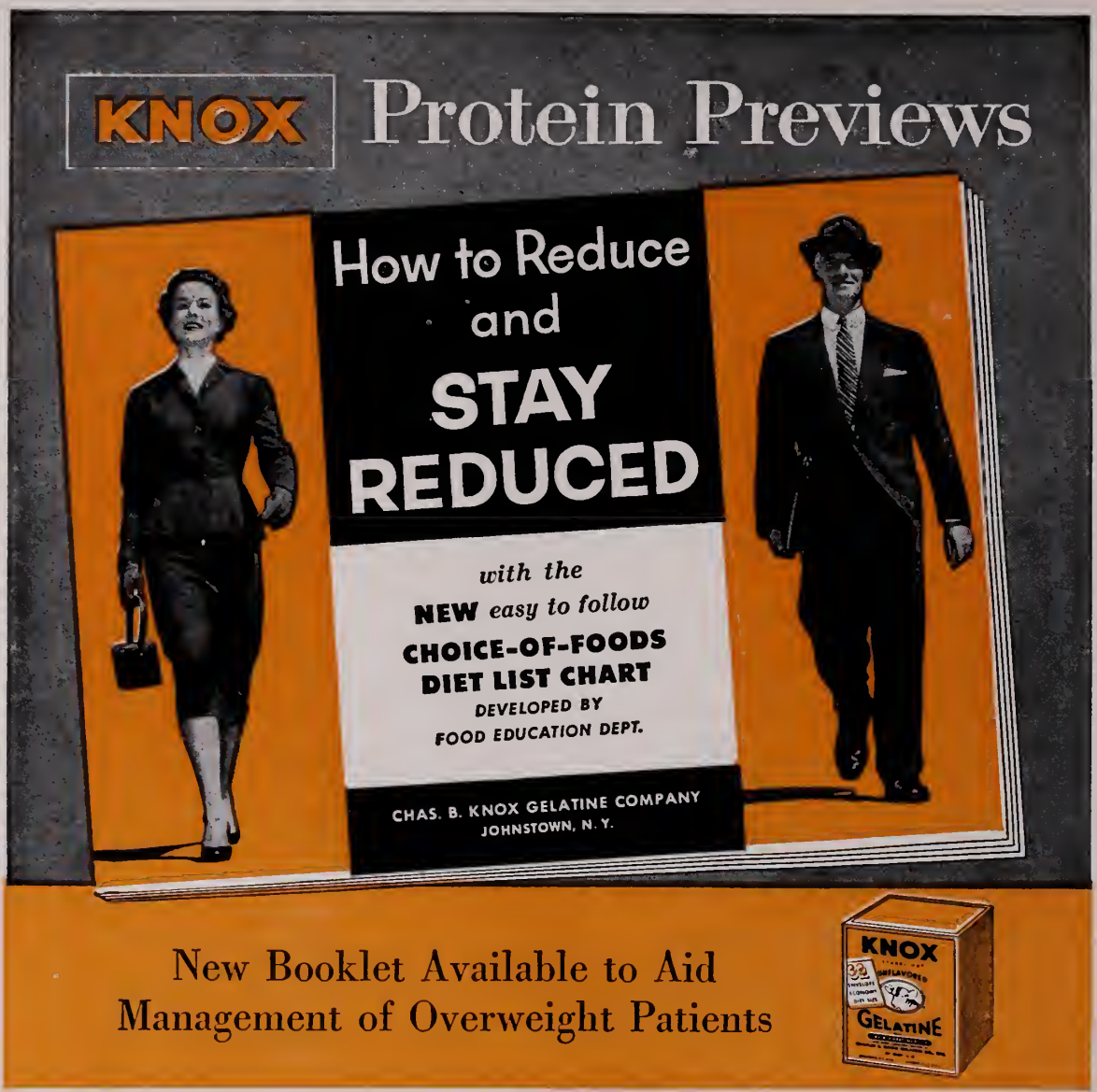
FOR EXCEPTIONAL CHILDREN

Year round private home and school for infants, children and adults on pleasant 250 acre farm near Charlottesville.

Write for booklet.

MRS. J. BASCOM THOMPSON, *Principal*

FREE UNION **VIRGINIA**



The 1955 edition of the well-known Knox "Eat-and-Reduce" booklet eliminates calorie counting for your obese patients. This year's edition is based on the use of Food Exchange Lists[1] which have proved so accurate in the dietary management of diabetics. These lists have been adapted to the dietary needs of patients who must lose weight.

The first 18 pages of the new booklet present in simple terms key information on the use of Food Exchanges (referred to in the book as Choices). In the center, double gatefold pages outline color-coded diets of 1200, 1600, and 1800 calories based on the Food Exchanges. Physicians will find these diets easy to revise to meet the special needs of individual patients.

To help patients persevere in their reducing plans, the last 14 pages of the new Knox booklet are devoted to more than six dozen *tested*, low-calorie recipes. Please use the coupon below to obtain copies of the new "Eat-and-Reduce" booklet for your practice.

1. Developed by the U. S. Public Health Service assisted by committees of The American Diabetes Assn., Inc. and The American Dietetic Assn.

Chas. B. Knox Gelatine Co., Inc.
Professional Service Dept. SJ-10
Johnstown, N. Y.

Please send me____copies of the new illustrated Knox "Eat-and-Reduce" booklet based on Food Exchanges.

enriched bread in *Obesity Management*



DIET organization in anti-obesity management must be based on the nutrient and energy values of the foods allowed, on the eating satisfaction they provide, and on their cost. Enriched bread merits a prominent place in reducing diets. While it supplies notable quantities of essential nutrients, it yields only moderate amounts of nutrient energy. At the same time, bread is universally appealing to the palate, and its cost remains low.

The daily allowance of enriched bread in the reducing diet may vary from one to six slices. One regular slice of enriched bread provides only 63 calories, but supplies these notable amounts of essential nutrients (based on estimated national average): 2.2 Gm. of protein, 0.06 mg. of thiamine, 0.6 mg. of niacin, 0.04 mg. of riboflavin, 0.7 mg. of iron, 23 mg. of calcium, and 21 mg. of phosphorus. Its protein, a composite of flour and milk proteins, is applicable to growth as well as tissue maintenance.

Universally liked, enriched bread enhances the eating satisfaction provided by the reducing diet. It blends well with all menus, lessening the hardship of dieting.

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

THE VIRGINIA BAKERS COUNCIL
In co-operation with
THE AMERICAN BAKERS ASSOCIATION

Foot-so-Port Shoe Construction and its Relation to Weight Distribution



- Insole extension and wedge at inner corner of heel where support is most needed.
- Special Supreme rubber heels are longer than most anatomic heels and maintain the appearance of normal shoes.
- The patented arch support construction is guaranteed not to break down.
- Innersoles are guaranteed not to crack, curl, or collapse. Insulated by a special layer of Texon which also cushions firmly and uniformly.
- Foot-so-Port lasts were designed and the shoe construction engineered with orthopedic advice.
- Over nine million pairs of men's, women's and children's Foot-so-Port Shoes have been sold.
- By a special process, using plastic positive casts of feet, we make more custom shoes for polio, club feet and all types of abnormal feet than any other manufacturer.

Write for details or contact your local **FOOT-SO-PORT** *Shoe Agency. Refer to your Classified Directory*

Foot-so-Port Shoe Company, Oconomowoc, Wis.

specify

LEDERLE

POLIOMYELITIS IMMUNE GLOBULIN

(human)

Lederle

For the modification of measles and the prevention or attenuation of infectious hepatitis and poliomyelitis.

LEDERLE LABORATORIES DIVISION
AMERICAN Cyanamid COMPANY Pearl River, New York



Whenever the diet is faulty, the appetite poor, or the loss of food is excessive

through vomiting or diarrhea—

Valentine's MEAT EXTRACT

stimulates the appetite,

increases the flow of digestive juices,

provides: supplementary amounts of vitamins, minerals and soluble proteins,

extra-dietary vitamin B_{12},

protective quantities of potassium, in a palatable and readily assimilated form.

Supplied in bottles of 2 or 6 fluidounces.

***Dosage** is 1 teaspoonful two or three times daily; two or three times this amount for potassium therapy.*

VALENTINE Company, Inc.
RICHMOND 9, VIRGINIA

1950	1952	1954	1955
Cortone®	Hydrocortone®	'Alflorone'	Deltra®

the delta$_1$ analogue of hydrocortisone

'Hydeltra' tablets

(Prednisolone, Merck)

2.5 mg.-5 mg.

(scored)

'Hydeltra'

Indications:

- RHEUMATOID ARTHRITIS
- BRONCHIAL ASTHMA
- INFLAMMATORY SKIN CONDITIONS

'Hydeltra' offers increased clinical effectiveness . . . lowers the incidence of untoward hormonal effects.

'Hydeltra' is supplied as 2.5 mg. and 5 mg. scored tablets in bottles of 30 and 100.

SHARP & DOHME

Philadelphia 1, Pa.
Division of Merck & Co., Inc.

Hydeltra is the trade-mark of Merck & Co., Inc. for its brand of prednisolone, supplied through Sharp & Dohme, Division of Merck & Co., Inc.





DESTROYS ENTEROCOCCI

This blood agar plate shows a strain of *beta* hemolytic enterococcus. Note extreme sensitivity of this organism to ERYTHROCIN—yet it easily resists the other antibiotics. Additional data: A study[1] involving 202 enteracoccic strains showed sensitivity to erythromycin in 99.4% of *alpha* hemolytic strains and 94.3% of *beta* hemolytic strains.

specific against coccic infections

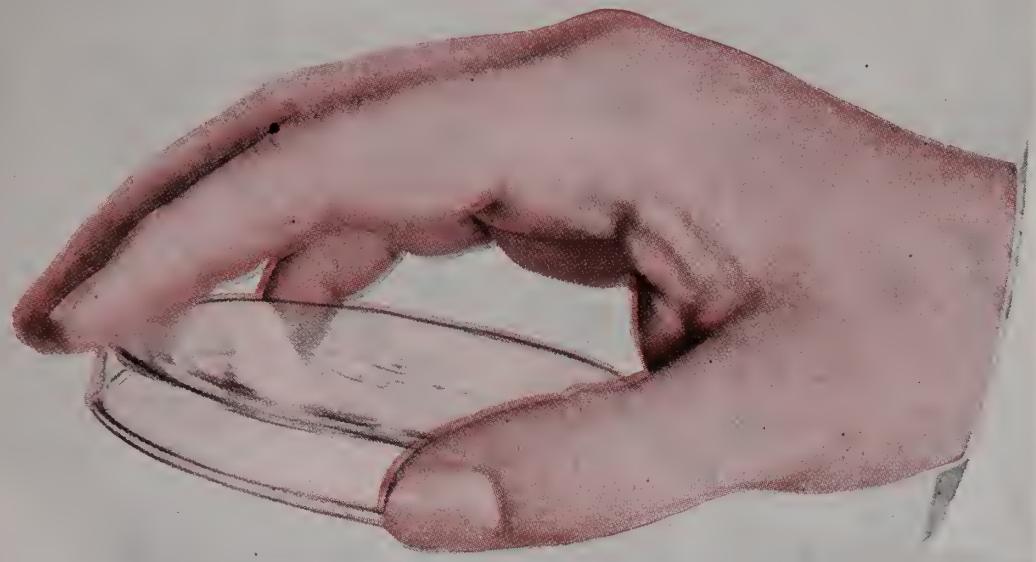
Now, you can prescribe *specific therapy* against staph-, strep- or pneumococci by simply writing *Filmtab* ERYTHROCIN Stearate. Since this coccic group causes most bacterial respiratory infections (and since these organisms are the very ones most sensitive to ERYTHROCIN) doesn't it make good sense to prescribe *Filmtab* ERYTHROCIN when the infection is coccic?

filmtab®

Erythrocin®

Erythromycin Stearate, Abbott

STEARATE





SPARES

INTESTINAL FLORA

This sensitivity test shows ERYTHROCIN and the some antibiotics against a typical intestinal strain of *E. coli*. Note that ERYTHROCIN and penicillin do not affect this gram-negative organism —although the other antibiotics show marked inhibitory action.

1. Eisenberg, et al., Antib. & Chemo., 3:1026-1028, Oct., 1953.

with little risk of serious side effects

Since ERYTHROCIN is inactive against gram-negative organisms, it is less likely to alter intestinal flora—with an accompanying low incidence of side effects. Also, your patients seldom get the allergic reactions sometimes seen with penicillin. Or loss of accessory vitamins during ERYTHROCIN therapy. *Filmtab* ERYTHROCIN Stearate (100 and 250 mg.) is supplied in bottles of 25 and 100 at pharmacies everywhere. Abbott

filmtab®

Erythrocin®

(Erythromycin Stearate, Abbott)

STEARATE

® Filmtab—Film sealed tablets; patent applied for.

509183

24-hour control

for the majority of diabetics



GLOBIN INSULIN

'B.W. & CO.'®

a clear solution . . . easy to measure accurately

Discovered by Reiner, Searle, and Lang
in The Wellcome Research Laboratories

BURROUGHS WELLCOME & CO. (U. S. A.) INC. • Tuckahoe 7, New York

proof of performance shown by proof of preference



Sealy's Accepted Posturepedic Mattress now*

WORLD'S LARGEST SELLING POSTUREPEDIC MATTRESS

To patients suffering from morning backache due to sleeping on an inferior mattress or improperly fitted bedboards, you may suggest the Sealy Posturepedic, with confidence.

*Accepted for advertising in the Journal of the American Medical Association, Sealy's Posturepedic is now the most widely used mattress of its type in the world. Since it is correctly *firm* it insures proper sleeping posture, gives natural support and complete comfort, too. For patients bothered by "low" morning backache, possibly caused by sleeping on a flabby mattress or make-shift bedboard, you may mention the Sealy Posturepedic *knowing* it is giving helpful relief in steadily increasing thousands of cases.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Sealy

SLEEPING ON A SEALY IS LIKE SLEEPING ON A CLOUD

SEALY MATTRESS COMPANY

Railroad Avenue, Bluefield, Va.
8 South Harvie Street, Richmond, Va.

THIS DR

is the **symbol**
of the
Standardized
Tablets
Quinidine Sulfate
Natural
0.2 Gram
(approx. 3 grains)
produced by
Davies, Rose & Co., Ltd.

By specifying the name, the physician will be assured that this standardized form of Quinidine Sulfate Natural will be dispensed to his patient.

Clinical samples sent to physicians on their request

Davies, Rose & Co., Ltd.
Boston 18, Mass.

Q4



It's actually easy to save money—when you buy United States Series E Savings Bonds through the automatic Payroll Savings Plan where you work! You just sign an application at your pay office; after that your saving is done *for* you. And the Bonds you receive will pay you interest at the rate of 3% per year, compounded semiannually, for as long as 19 years and 8 months if you wish! Sign up today! Or, if you're self-employed, invest in Bonds regularly where you bank. There's no surer place to put your money, for United States Savings Bonds are as safe as America!

Safe as America — U.S. Savings Bonds

PUBLIC SERVICE ADVERTISING COUNCIL

When the gun failed, they used a tablespoon



HE LEARNED acting the hard way, barnstorming frontier towns (Chicago, pop. 2,000), traveling by barge and stagecoach, playing in sheds, courthouses, taverns.

One night in Houston, a Texan even suggested the troupe tour through Indian country, carrying their stage weapons for protection. Joe Jefferson declined. He later said he had shivered when he imagined himself facing a hostile Indian and armed only with a stage pistol whose tendency to misfire had several times "compelled our heavy villain to commit suicide with a tablespoon."

By the 1860's, Jefferson was America's favorite actor. When he played his famous Rip Van Winkle (see picture), "one-night" towns declared a "Jefferson Holiday." Business stopped, schools closed, so that everyone would get a chance to see him act.

They loved Joe Jefferson everywhere for his genius at making people happy. And his sunny outlook still sparkles in the spirit of America. Like Joe Jefferson, Americans still know how to travel a hard road to reach their goals, how to smile when the going's roughest.

These confident Americans are the real wealth of our nation. And they are the real reason why our country's Savings Bonds rank among the world's finest investments.

That's why, to save for *your* goals in life, you cannot find a surer, safer way than United States Savings Bonds. Invest in them regularly—and hold onto them!

The U.S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.

Equanil*

a new anti-anxiety factor

Meprobamate

(2-methyl-2-*n*-propyl-1 3-propanediol dicarbamate)

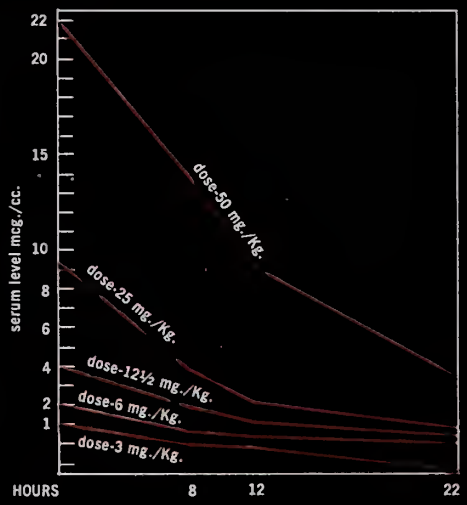
Appropriate to an age of mental and emotional stress,
EQUANIL has demonstrated remarkable properties for promoting equanimity and release from tension,
without mental clouding.
EQUANIL is a pharmacologically unique anti-anxiety agent with muscle-relaxing features.
Acting specifically on the central nervous system,
it has a primary place in the
management of patients with anxiety neuroses,
tension states, and associated conditions.[1,2]
In clinical trials, patients respond with ". . . lessening of tension, reduced irritability and restlessness, more restful sleep, and generalized muscle relaxation."[2]
It is a valuable adjunct to psychotherapy.
Clinical use is not limited by significant side-effects, toxic manifestations, or withdrawal phenomena.[1,2]
Supplied: Tablets, 400 mg., bottles of 48.

Wyeth®
Philadelphia 2, Pa.

*Trademark

1. Selling, L.S.: J.A.M.A. 157: 1594 (April 30) 1955. 2. Borrus, J.C.: J.A.M.A. 157: 1596 (April 30) 1955.

Mean Serum Levels After Intramuscular Injection of Terramycin.



"The absorption into the blood stream after injections of various dosages was very rapid, and in fifteen minutes a high therapeutic level was obtained. . . ."

O'Regan, C., and Schwarzer, S.: J. Pediat. 44:172 (Feb.) 1954.

Whenever oral administration is impracticable or contraindicated—

Whenever speedy broad-spectrum antibiotic effects are needed—

Intramuscular Terramycin has proved itself an agent of choice, efficacious and well tolerated.

High therapeutic levels... rapidly attained

TERRAMYCIN® INTRAMUSCULAR

BRAND OF OXYTETRACYCLINE

the first broad-spectrum antibiotic available in this form

Pfizer

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, N.Y.

THERAPEUTIC BILE

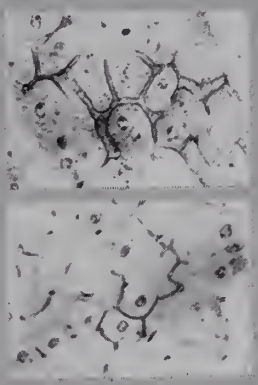
for patients with liver and gallbladder disorders

confirmed in the laboratory

In the isolated perfused liver (rat), *hydro*choleresis with *Decholin Sodium* increases bile flow 200 to 300 per cent—*with no increase in total solids.*[2]

(A) *Hydro*choleresis: Bile capillaries (rabbit liver) are filled with dilute bile 15 minutes after i.v. injection of sodium dehydrocholate.

(B) Untreated control.



Photomicrographs Demonstrate *Hydro*choleresis: Increased Secretion of Highly Dilute Bile[1]

confirmed in practice

"true hydrocholeresis —a marked increase both in volume and fluidity of the bile"[3]

"Since bile of this nature and in this large output can flush out even the smaller and more tortuous biliary radicles, hydrocholeresis [with *Decholin* and *Decholin Sodium*] aids in removal of inspissated material and combats infection."[3]

Decholin®—Decholin Sodium®

Decholin Tablets (dehydrocholic acid, *Ames*) 3¾ gr. (0.25 Gm.). *Decholin Sodium* (sodium dehydrocholate, *Ames*) 20% aqueous solution; ampuls of 3 cc., 5 cc. and 10 cc.

(1) Clara, M.: Med. Monatsschr. 7:356, 1953. (2) Brauer, R. W., and Pessotti, R. L.: Science *115*:142, 1952. (3) Schwimmer, D.; Boyd, L. J., and Rubin, S. H.: Bull. New York M. Coll. *16*:102, 1953.

63255

AMES COMPANY, INC • ELKHART, INDIANA Ames Company of Canada, Ltd., Toronto

for strong, sturdy, solid growth

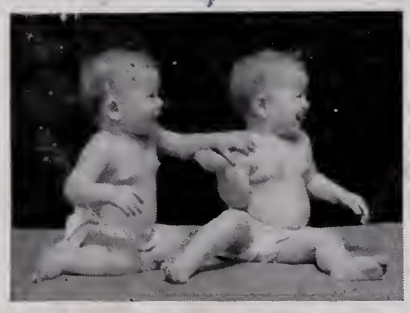
Lactum



LIQUID OR
POWDERED

NUTRITIONALLY SOUND FORMULA FOR INFANTS

Lactum®-fed babies get all the proved benefits of a cow's milk and Dextri-Maltose® formula. Mothers appreciate the convenience and simplicity of this ready-prepared formula. Physicians are assured the important protein margin of safety for sturdy growth.





Lactum-fed babies are typically sturdy babies because Lactum supplies ample protein for sound growth and development.

The generous protein intake of babies fed milk and carbohydrate formulas such as Lactum promotes the formation of muscle mass. It also provides for good tissue turgor and excellent motor development.[1]

(1) Jeans, P. C., in A. M. A. Handbook of Nutrition, ed. 2, Philadelphia, Blakiston, 1951, pp. 275-278.

MEAD | SYMBOL OF SERVICE TO THE PHYSICIAN

MEAD JOHNSON & COMPANY · EVANSVILLE, INDIANA, U.S.A.

FFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

VIRGINIA MEDICAL MONTHLY

Contents

Trends in Public Health, William P. Shepard . . . 485

The Diagnosis and Treatment of Chronic Subdural Hematoma, John M. Meredith . . . 490

A Quarter Century of Obstetrical Practice in Virginia, Eugene S. Groseclose . . . 496

The Surgery of Patent Ductus Arteriosus, Lewis H. Bosher, Jr. and Joseph Bailey . . . 507

Drug Therapy of Tuberculosis, Edward S. Ray . . . 511

An Interesting Case of Histoplasmosis, James R. York . . . 514

Medical Nomenclature and Dermatology, Asher A. Friedman . . . 516

(Continued on page 6)

THE N.Y. ACADEMY OF MEDICINE
NOV -9 1955
LIBRARY

Tonsillitis, pharyngitis quickly yield to

ILOTYCIN

(Erythromycin, Lilly)

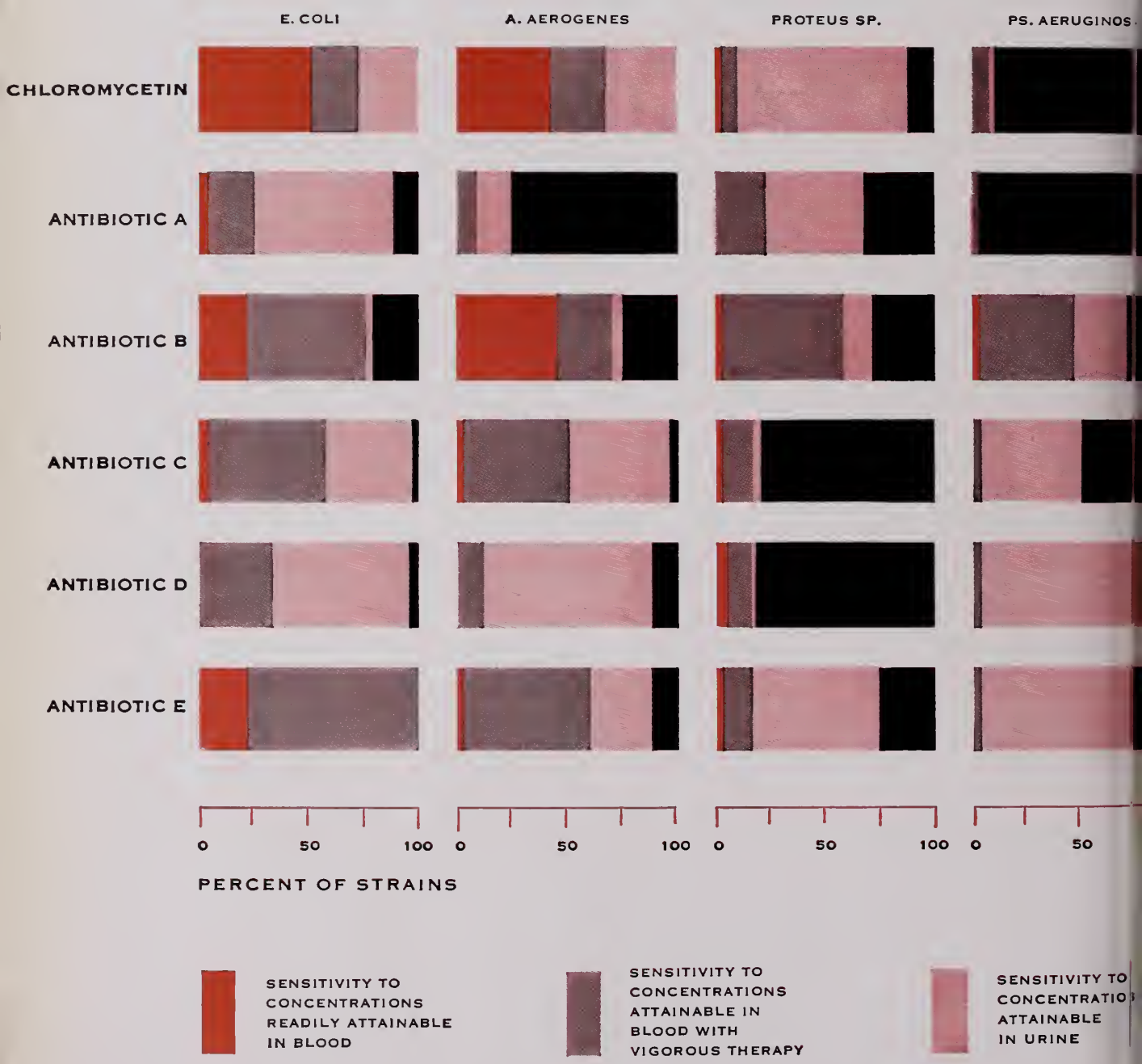
Temperature rapidly returns to normal; swelling and soreness readily subside. Notably safe and well tolerated.

dosage: Usually, 250 mg. q. 6 h. Children, 5 mg. per pound of body weight q. 6 h.

Lilly

532200

Resistance of Common Urinary Tract Pathogens to CHLOROMYCETIN and Other Major Antibiotics



less resistance encountered...



*Adapted from Kass, E. H.[9]

Chloromycetin®

for today's problem pathogens

Recent in vitro tests and clinical studies again demonstrate the unsurpassed efficacy of CHLOROMYCETIN (chloramphenicol, Parke-Davis) against a wide variety of pathogens. For example, against urinary infections, now characterized by increased incidence of resistant gram-positive and gram-negative strains, CHLOROMYCETIN continues to provide outstanding antibacterial action.[1-11]

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

References (1) Altemeier, W. A.; Culbertson, W. R.; Sherman, R.; Cole, W.; Elstun, W., & Fultz, C. T.: *J.A.M.A.* 157:305, 1955. (2) Kutscher, A. H.; Seguin, L.; Lewis, S.; Piro, J. D.; Zegarelli, E. V.; Rankow, R., & Segall, R.: *Antibiotics & Chemother.* 4:1023, 1954. (3) Clapper, W. E.; Wood, D. C., & Burdette, R. I.: *Antibiotics & Chemother.* 4:978, 1954. (4) Sanford, J. P.; Favour, C. B.; Harrison, J. H., & Mao, F. H.: *New England J. Med.* 251:810, 1954. (5) Balch, H. H.: *Mil. Surgeon* 115:419, 1954. (6) Sanford, J. P.; Favour, C. B., & Mao, F. H.: *J. Lab. & Clin. Med.* 45:540, 1955. (7) Felshin, G.: *J. Am. M. Women's A.* 10:51, 1955. (8) Jones, C. P.; Carter, B.; Thomas, W. L., & Creadick, R. N.: *Obst. & Gynec.* 5:365, 1955. (9) Kass, E. H.: *Am. J. Med.* 18:764, 1955. (10) Stein, M. H., & Gechman, E.: *New England J. Med.* 252:906, 1955. (11) Yow, E. M.: *Postgrad. Med.* 17:413, 1955.

MEDICAMENTA VERA

PARKE, DAVIS & COMPANY DETROIT, MICHIGAN

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April 1874)

Published monthly by The Medical Society of Virginia.

PUBLICATION COMMITTEE

Lewis H. Bosher, Jr., M.D., *Chairman and Editor*
Wyndham B. Blanton, M.D. Lloyd B. Burk, M.D.
with
EDITORIAL BOARD
J. Morrison Hutcheson, M.D.
Cato Drash, M.D.
Ennion S. Williams, M.D.
A. Brownley Hodges, M.D.
Hugh H. Trout, Jr., M.D.

The MONTHLY is not responsible for the opinions and statements of its contributors.

All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

Managing Editor—E. SPENCER WATKINS
1105 West Franklin Street, Richmond 20.

Annual Subscription—$2.00 Single Copies—25¢

Second-class mail privileges authorized at Richmond, Virginia

THE MEDICAL SOCIETY OF VIRGINIA

OFFICERS

President—CARRINGTON WILLIAMS, M.D., Richmond

President-Elect—JAMES P. KING, M.D., Radford

Vice-Presidents—JAMES W. LOVE, M.D., Alexandria
WAVERLY R. PAYNE, M.D., Newport News
BENJAMIN W. RAWLES, JR., M.D., Richmond

Executive Secretary-Treasurer—ROBERT I. HOWARD, Richmond

Councilors—A. A. CREECY, M.D., Newport News
WALTER P. ADAMS, M.D., Norfolk
GUY W. HORSLEY, M.D., Richmond
W. J. OZLIN, M.D., South Hill
L. P. BAILEY, M.D., Nathalie
FRANK A. FARMER, M.D., Roanoke
H. W. MILLER, M.D., Woodstock
MCLEMORE BIRDSONG, M.D., Charlottesville
JAMES P. WILLIAMS, M.D., Richlands
HARRY C. BATES, JR., M.D., Arlington

Delegates to A.M.A.
J. M. HUTCHESON, M.D., Richmond
VINCENT W. ARCHER, M.D., Charlottesville

Alternate Delegates to A.M.A.
ALLEN BARKER, M.D., Roanoke
W. LINWOOD BALL, M.D., Richmond

Executive Office—1105 W. Franklin St., Richmond 20.

INDEX TO ADVERTISERS

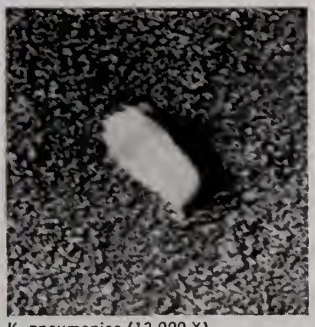
Abbott ---- 8-9
American Meat Institute ---- 10
Appalachian Hall ---- 42
Ayerst ---- 56
Baker Laboratories, Inc., The ---- 51
Bayer Company Division, The ---- 58
Burroughs Wellcome & Co. (U.S.A.) Inc. ---- 15
Canada Dry Ginger Ale, Inc. ---- 14
Contra Company ---- Inside Back Cover
Corn Products Refining Company ---- 57
Davies, Rose & Co., Ltd. ---- 14
Eli Lilly and Company ---- Front Cover, 32
First and Merchants National Bank of Richmond ---- 18
Foot-so-Port Shoe Company ---- 18
Garst Bros. Dairy Inc. ---- 6
Geigy Pharmaceuticals ---- 25
Gill Memorial Eye, Ear and Throat Hospital, Inc. ---- 37
General Electric ---- 27
Jefferson, A. G. ---- 6
Johnston-Willis Hospital ---- 36
Keeley Institute, The ---- 38
Keleket X-ray Corporation ---- 20
Knox Gelatine Company, Inc., Chas. B. ---- 7
Lakeside Laboratories, Inc. ---- 34
Lederle Laboratories Division ---- 17, 52-53
Mead Johnson & Company ---- Back Cover
Medical College of Virginia ---- 36
New York Polyclinic Medical School and Hospital ---- 45
Parke, Davis & Company ---- 2-3
Patterson's Safe Service Drug Stores ---- 6
Peoples Drug Stores, Inc. ---- 50
Pfizer Laboratories ---- 26, 49
Plyler's Nursing Home, Mrs. ---- 42
Richmond Eye Hospital—Richmond Ear, Nose and Throat Hospital ---- 41
Richmond Hotels Incorporated ---- 17
Riverside Convalescent Home ---- 41
Riverside Hospital ---- 40
Saint Albans ---- 36
Schering ---- 12-13, 30-31
Sealy Mattress Company ---- 11
Searle ---- 33
Sharpe & Dohme ---- 17, 18, 21, 43, 45, 56, 60
Squibb ---- 28
State Board of Medical Examiners of Virginia, The ---- 38
St. Elizabeth's Hospital ---- 43
St. Luke's Hospital—McGuire Clinic ---- 40
Stuart Circle Hospital ---- 44
Terrace Hill Nursing Home, Inc. ---- 38
Thompson Homestead School, The ---- 38
Tucker Hospital, Inc. ---- 44
United States Brewers Foundation ---- 48
Upjohn ---- 5, 19, 29, 35, 46, 59
U. S. Vitamin Corporation ---- 22-23
Valentine Company, Inc. ---- 11
Viceroy Cigarette ---- 47
Virginia Bakers Council, The ---- 16
Virginia Medical Monthly ---- 4
Westhrook Sanatorium ---- 37
White Cross Hospital ---- 39
Williams Printing Co. ---- 60
Wine Advisory Board ---- 55
Winthrop-Stearns Inc. ---- 54
Wyeth ---- 24

The organisms commonly involved in

Bronchopneumonia



D. pneumoniae (10,000 X)



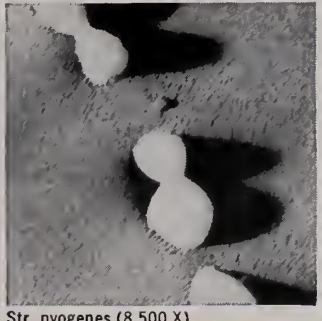
K. pneumoniae (13,000 X)



H. pertussis (7,500 X)



Staph. aureus (9,000 X)



Str. pyogenes (8,500 X)



H. influenzae (16,000 X)

Upjohn

ELECTRON MICROGRAPHS

***All* of them are included in the more than 30 organisms susceptible to broad-spectrum**

PANMYCIN*

HYDROCHLORIDE

100 mg. and 250 mg. capsules • 125 mg. and 250 mg./tsp. oral suspension (PANMYCIN Readimixed)
100 mg./cc. drops • 100 mg./2 cc. injection, intramuscular
100 mg., 250 mg., and 500 mg. vials, intravenous

*TRADEMARK, REG. U. S. PAT. OFF. — THE UPJOHN BRAND OF TETRACYCLINE

At All

DEPENDABLE

PRESCRIPTION SERVICE

and

SERVICE TO PHYSICIANS

PATTERSON'S
SAFE SERVICE DRUG STORES

Prescription Specialists

Lynchburg, Va. Martinsville, Va.
Danville, Va. Altavista, Va.
Winston-Salem, N. C.

For the
Discriminating
Eye Physician

Depend on the Services of a Guild Optician

in
Lynchburg, Virginia

A. G. JEFFERSON
Ground Floor Allied Arts Bldg.

Exlusively Optical

GRADE A PASTEURIZED PRODUCTS

GARST BROS. DAIRY INC.
DIAL 5501

GRADE A MILK
HOMOGENIZED MILK (Natural Vitamin D added)
GOLDEN GUERNSEY MILK
GOLDEN FLAKE BUTTERMILK
SKIM MILK—COFFEE CREAM
WHIPPING CREAM—COTTAGE CHEESE
DARI-RICH CHOCOLATE MILK
GARST BROS. DAIRY BUTTER

"ROANOKE'S MOST MODERN DAIRY"

LABORATORY CONTROL
FOR YOUR PROTECTION
DIAL 5502

CONTENTS
(Continued)

Public Relations	517
Book Announcements	517
Mental Health	518
Public Health	520
Woman's Auxiliary	521
President's Message	523
Editorial	524
Society Proceedings	526
News	526
Obituaries	530

INDEX TO ADVERTISERS—Page 4

Entered as Second Class Matter at the Postoffice, Richmond, Va.

KNOX Protein Previews





New Study Shows Gelatine
Restores Brittle Fingernails to Normal

Directions for making the Knox Gelatine drink in every package



Brittle, fragile or laminating fingernails are the bane of many a woman's existence. Yet this highly prevalent and distressing condition often has gone uncontrolled for lack of effective therapy. Now, you can promise these patients substantial relief in a large percentage of cases.

In a recent study[1] that confirmed previous work[2] Knox Gelatine was used to treat 36 women with fragile, brittle, laminating fingernails. The response was most gratifying. Except for three patients who discontinued the therapy, three diabetics, and two women who had congenital deformities, the splitting ceased and all other patients were able to manicure their nails to a full point by the time the study ended.

Optimal dosage proved to be one envelope (7 grams) of Knox Gelatine administered daily for three months. Improvement, however, was noted after the first month. If you would like more complete details of this work, just use the coupon.

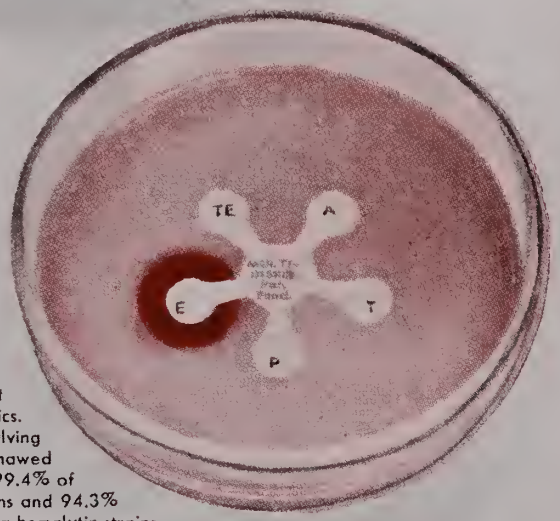
1. Rosenberg, S. and Oster, K. A., "Gelatine in the Treatment of Brittle Nails," *Conn. State Med. J.* **19**:171-179, March 1955.
2. Tyson, T. L., *J. Invest. Dermat.* **14**:323, May 1950.

Chas. B. Knox Gelatine Company, Inc.
Professional Service Dept. SJ-9
Johnstown, N. Y.

Please send me a reprint of the article by Rosenberg and Oster with illustrated color brochure.

YOUR NAME AND ADDRESS





DESTROYS ENTEROCOCCI

This blood agar plate shows a strain of *beta* hemalytic enteracaccus. Nate extreme sensitivity af this arganism to ERYTHROCIN—yet it easily resists the ather antibiotics. Additianal data: A study[1] invalving 202 enterococcic strains shawed sensitivity ta erythromycin in 99.4% of *alpha* hemalytic strains and 94.3% of *beta* hemalytic strains.

specific against coccic infections

Now, you can prescribe *specific therapy* against staph-, strep- or pneumococci by simply writing *Filmtab* ERYTHROCIN Stearate. Since this coccic group causes most bacterial respiratory infections (and since these organisms are the very ones most sensitive to ERYTHROCIN) doesn't it make good sense to prescribe *Filmtab* ERYTHROCIN when the infection is coccic?

filmtab®

Erythrocin®

Erythromycin Stearate, Abbot*

STEARATE





SPARES

INTESTINAL FLORA

This sensitivity test shows ERYTHROCIN and the same antibiatics against a typical intestinal strain af *E. cali*. Nate that ERYTHROCIN and penicillin da nat affect this gram-negative arganism —althaugh the ather antibiatics show marked inhibitary actian.

1. Eisenberg, et al., Antib. & Chemo., 3:1026-1028, Oct., 1953.

with little risk of serious side effects

Since ERYTHROCIN is inactive against gram-negative organisms, it is less likely to alter intestinal flora—with an accompanying low incidence of side effects. Also, your patients seldom get the allergic reactions sometimes seen with penicillin. Or loss of accessory vitamins during ERYTHROCIN therapy. *Filmtab* ERYTHROCIN Stearate (100 and 250 mg.) is supplied in bottles of 25 and 100 at pharmacies everywhere. Abbott

filmtab®

Erythrocin®

(Erythromycin Stearate, Abbott)

STEARATE

® Filmtab—Film scaled tablets; patent applied for.

509185

Pork in the Dietary During Pregnancy and Lactation

CERTAIN NUTRIENTS are required in greater than normal amounts during pregnancy and lactation. Pork meat, though its cost is low, supplies a remarkably high quantity of the nutrients required by the maternal organism in these periods of physiologic need.

During pregnancy the maternal organism may store 3.3 to 5.5 pounds of protein in excess of that contributed to fetal tissue.[1] Enough iron is stored to approximate the entire amount secreted in the milk during 9 months of lactation, in addition to the iron supplied to the fetus.[2]

The body of the newborn infant contains approximately 500 grams of protein, 14 grams of phosphorus, and 0.5 gram of iron.[3] It is estimated that the lactating mother, through breast milk, provides a 26 week old infant with about 12 grams of protein, 76 grams of lactose, and 1.2 mg. of iron each day.[2]

Pork meat, an excellent source of high quality protein, thiamine, niacin, and iron,[4] also supplies valuable amounts of other B vitamins, as well as phosphorus, magnesium, and potassium. The thiamine content of pork is particularly important, since there are few more valuable food sources of this vitamin.[4]

Pork and pork sausage—economical, good tasting—are valuable components of the dietary of the pregnant or lactating woman. Just how valuable, is shown in the table below.

1. Toverud, K.U.; Stearns, G., and Macy, I.G.: Maternal Nutrition and Child Health, an Interpretative Review, Washington, D.C., National Research Council, Bull. 123, 1950.

2. McLester, J.S., and Darby, W.J.: Nutrition and Diet in Health and Disease, ed. 6, Philadelphia, W.B. Saunders Company, 1952, p. 241.

3. Marrack, J.R.: Food and Planning, London, Victor Gollancz, Ltd., 1943, p. 67.

4. Wolgamot, I.H., and Fincher, L.J.: Pork Facts for Consumer Education, Washington, D.C., United States Department of Agriculture, AIB No. 109, 1954.

5. Watt, B.K., and Merrill, A.L.: Composition of Foods—Raw, Processed, Prepared, Washington, D.C., United States Department of Agriculture, Agricultural Handbook No. 8, 1950.

6. Bowes, A. deP., and Church, C.F.: Food Values of Portions Commonly Used, ed. 7, Philadelphia, Anna dePlanter Bowes, 1951.

Percentages of Recommended Daily Dietary Allowances* for Pregnant (3rd Trimester) and Lactating Women Provided by 3-Ounce Portions of Cooked Pork Meats and Pork Sausage

	Protein	Iron	Phosphorus	Thiamine	Riboflavin	Niacin	Calories
PREGNANCY (3rd trimester)							
Ham, without bone, 3 oz., cooked[5]	25.0%	17.3%	13.5%	30.0%	10.0%	26.7%	12.5%
Pork Chops, without bone, 3 oz., cooked[5]	25.0%	17.3%	13.3%	47.3%	10.0%	28.7%	10.5%
Pork Sausage, 3 oz., cooked[6]	17.3%	14.0%	9.2%	27.7%	10.1%	18.5%	14.7%
LACTATION							
Ham, without bone, 3 oz., cooked[5]	20.0%	17.3%	10.1%	30.0%	8.0%	26.7%	10.2%
Pork Chops, without bone, 3 oz., cooked[5]	20.0%	17.3%	10.0%	47.3%	8.0%	28.7%	8.6%
Pork Sausage, 3 oz., cooked[6]	13.8%	14.0%	6.9%	27.7%	8.1%	18.5%	12.0%

*Recommended Dietary Allowances, Washington, D. C., National Academy of Sciences—National Research Council, Publication 302, 1953

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

American Meat Institute
Main Office, Chicago... Members Throughout the United States



Whenever the diet is faulty, the appetite poor, or the loss of food is excessive

through vomiting or diarrhea—

Valentine's
MEAT EXTRACT

stimulates the appetite,

increases the flow of digestive juices,

provides: supplementary amounts of vitamins, minerals and soluble proteins,

extra-dietary vitamin B_{12},

protective quantities of potassium, in a palatable and readily assimilated form.

Supplied in bottles of 2 or 6 fluidounces.

***Dosage** is 1 teaspoonful two or three times daily; two or three times this amount for potassium therapy.*

VALENTINE Company, Inc.
RICHMOND 9, VIRGINIA

---

proof of performance shown by proof of preference



Sealy's Accepted Posturepedic Mattress now*

WORLD'S LARGEST SELLING POSTUREPEDIC MATTRESS

To patients suffering from morning backache due to sleeping on an inferior mattress or improperly fitted bedboards, you may suggest the Sealy Posturepedic, with confidence.

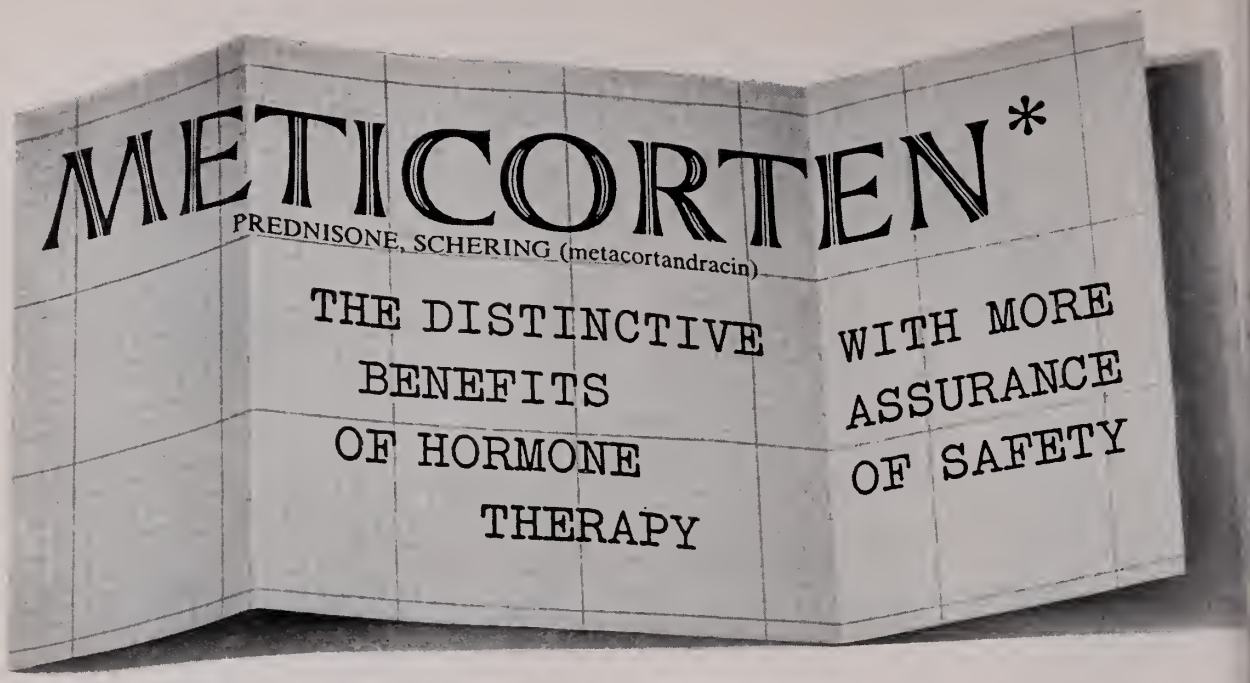
*Accepted for advertising in the Journal of the American Medical Association, Sealy's Posturepedic is now the most widely used mattress of its type in the world. Since it is correctly *firm* it insures proper sleeping posture, gives natural support and complete comfort, too. For patients bothered by "low" morning backache, possibly caused by sleeping on a flabby mattress or make-shift bedboard, you may mention the Sealy Posturepedic *knowing* it is giving helpful relief in steadily increasing thousands of cases.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Sealy

SLEEPING ON A *SEALY* IS LIKE SLEEPING ON A CLOUD

SEALY MATTRESS COMPANY
Railroad Avenue, Bluefield, Va.
8 South Harvie Street, Richmond, Va.



For physicians who hesitate to use the older corticosteroids because of diminishing therapeutic returns and frequently predominating major undesirable side effects, METICORTEN with its high therapeutic ratio reduces the incidence of certain major undesirable side effects.

- minimizes sodium and water retention
- minimizes weight gain due to edema
- no excessive potassium depletion
- in rheumatoid arthritis, effective relief of pain, swelling, tenderness; diminishes joint stiffness
- in intractable asthma, relief of bronchospasm, dyspnea, cough; increases vital capacity
- clinical response even where cortisone or hydrocortisone ceases to be effective—"cortisone escape"
- effective in smaller dosage

BIBLIOGRAPHY

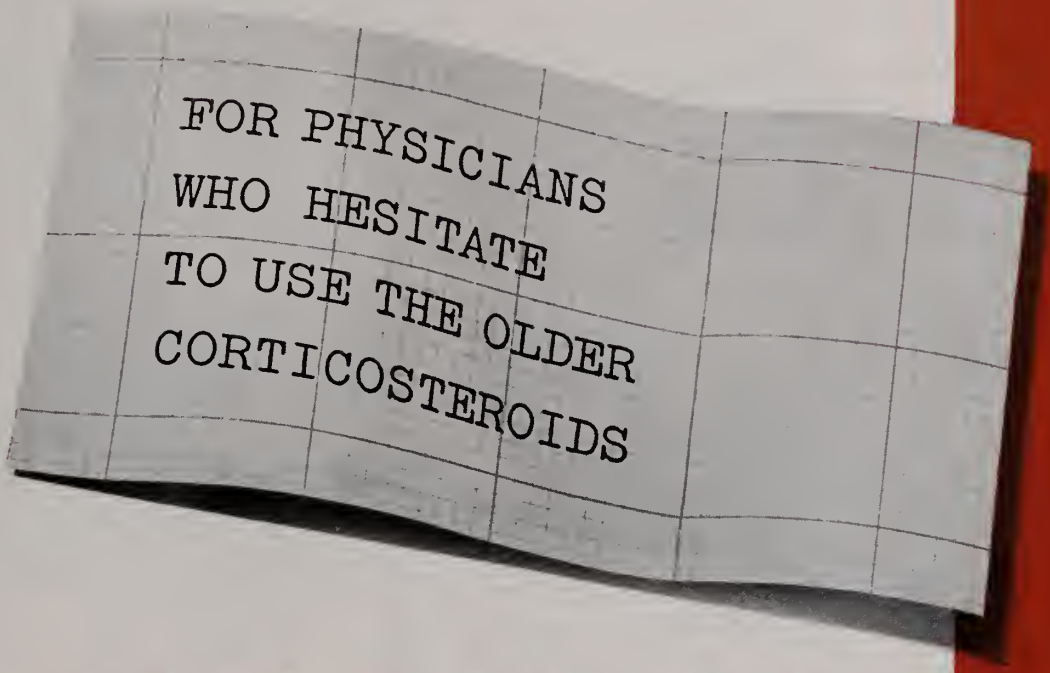
(1) Bunim, J. J.; Pechet, M. M., and Bollet, A. J.: J.A.M.A. *157*:311, 1955. (2) Gray, J. W., and Merrick, E. Z.: J. Am. Geriat. Soc. *3*:337, 1955. (3) Boland, E. W.: California Med. *82*:65, 1955. (4) Dordick, J. R., and Gluck, E. J.: J.A.M.A. *158*:166, 1955. (5) Margolis, H. M., and others: J.A.M.A. *158*:454, 1955. (6) Hollander, J. L.: Philadelphia Med. *50*:1357, 1955. (7) Barach, A. L.; Bickerman, H. A., and Beck, G. J.: Dis. Chest *27*:515, 1955. (8) Arbesman, C. E., and Ehrenreich, R. J.: J. Allergy *26*:189, 1955. (9) Skaggs, J. T.; Bernstein, J., and Cooke, R. A.: J. Allergy *26*:201, 1955. (10) Schwartz, E.: J. Allergy *26*:206, 1955. (11) Nelson, C. T.: J. Invest. Dermat. *24*:377, 1955. (12) Robinson, H. M., Jr.: J.A.M.A. *158*:473, 1955. (13) Herzog, H. L., and others: Science *121*:176, 1955. (14) Perlman, P. L., and Tolksdorf, S.: Fed. Proc. *14*:377, 1955. (15) King, J. H., and Weimer, J. R.: Experimental and clinical studies on Meticorten (prednisone) and Meticortelone (prednisolone) in ophthalmology, A.M.A. Arch. Ophth., in press. (16) Barach, A. L.; Bickerman, H. A., and Beck, G. J.: Clinical and physiological studies on the use of metacortandracin in respiratory disease. II. Pulmonary emphysema and pulmonary fibrosis, Dis. Chest, to be published. (17) Dordick, J. R., and Gluck, E. J.: Preliminary clinical trials with prednisone (Meticorten) in systemic lupus erythematosus, A.M.A. Arch. Dermat. & Syph., in press. (18) Goldman, L.; Flatt, R., and Baskett, J.: Assay technics for local anti-inflammatory activity in the skin of man with prednisone (Meticorten) and prednisolone (Meticortelone), J. Invest. Dermat., in press.

METICORTEN,* brand of prednisone.
*T.M.

in

rheumatoid arthritis,

intractable asthma, rheumatic fever, nephrosis, certain skin disorders such as acute disseminated lupus erythematosus, acute pemphigus, extensive atopic dermatitis and other allergic dermatoses, and certain eye disorders



METICORTEN

PREDNISONE, SCHERING (metacortandracin)

SCHERING CORPORATION BLOOMFIELD, NEW JERSEY

Schering

MC-J-520

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

...from Two Outstanding Cases

RED LABEL • BLACK LABEL

Both 86.8 Proof



Johnnie Walker stands out in its devotion to quality. Every drop is made in Scotland. Every drop is distilled with the skill and care that come from generations of fine whisky-making. And every drop of Johnnie Walker is guarded all the way to give you *perfect* Scotch whisky... the same high quality the world over.



BORN 1820...

STILL GOING STRONG

JOHNNIE WALKER

BLENDED SCOTCH WHISKY

CANADA DRY GINGER ALE, Inc., New York, N. Y., *Sole Importer*

WHY SENSITIZE

in topical and ophthalmic infections

USE 'POLYSPORIN'®

brand

POLYMYXIN B—BACITRACIN OINTMENT

to insure broad-spectrum therapy with minimum allergenicity

For topical use: in ½ oz. and 1 oz. tubes.
For ophthalmic use: in ⅛ oz. tubes.



BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.



Enriched Bread...

Low Cost Insurance Against Nutritional Ills

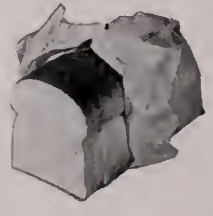
In recent years the improved pattern of foods consumed in the United States has largely eliminated frank forms of nutritional deficiency diseases. This great gain in public health is attributable in large measure to the nationwide distribution of nutritionally improved staple foods, well exemplified by enriched bread.[1] "Such improvement of foods in the United States has been described as low-cost insurance against nutritional ills."[2,3]

Present-day enriched white bread, enhanced in B vitamins, minerals, and milk protein content, serves as an important nutritional protection to consumers. In particular, low-income groups, who eat large amounts of enriched bread because of its low cost, benefit by its high nutritional values.[3]

Wherever sold, enriched bread complies with the federal definition and standard for the product. Per pound, enriched bread provides at least 1.1 mg. of thiamine, 0.7 mg. of riboflavin, 10 mg. of niacin, and 8 mg. of iron. By and large, it also supplies about 400 mg. of calcium and 39 grams of protein. Since the protein consists of flour and milk proteins, it is biologically effective for growth as well as tissue maintenance. Enriched bread is one of the reasons why "We are a nation . . . fed on a plane of nutrition unequalled anywhere in the world."[4]

1. King, C. G.: Newer Concepts of Optimum Nutrition, Food Technol. *8*:486 (Nov.) 1954.
2. U.S. National Office of Vital Statistics: Vital Statistics of the United States, 1948. Part I. Washington, D.C., U.S. Government Printing Office, 1950.
3. Sebrell, W. H.: Developing Modern Nutrition Programs, Public Health Reports, United States Department of Health, Education, and Welfare *69*:277 (Mar.) 1954.
4. Josephson, D. V.: Review of Chemical Mechanisms Affecting Flavor Acceptability of Dairy Products, J. Agr. & Food Chem. *2*:1182 (Nov.) 1954.

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.



THE VIRGINIA BAKERS COUNCIL
In co-operation with
THE AMERICAN BAKERS ASSOCIATION

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 'Hydeltra'

DELTRA® tablets

(Prednisone, Merck)

5 mg. - 2.5 mg. - 1 mg. (scored)

the delta-1 analogue of cortisone

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

Indications:

Rheumatoid arthritis
Bronchial asthma
Inflammatory skin conditions

The American Way

is peace, prosperity, and goodwill toward our fellow man—to invest our time in educating and learning; and our money in good citizens and fine institutions.



One of the finest institutions of your State is Richmond Hotels Incorporated, one that maintains the highest modern hotel standards . . . one that combines the hospitality and charm of the old and the convenience and comfort of the new.

John Marshall William Byrd
King Carter Richmond

Richmond Hotels Incorporated

---

specify

LEDERLE

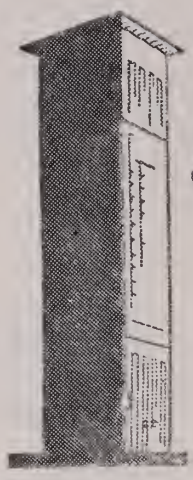
POLIOMYELITIS IMMUNE GLOBULIN

(human)

Lederle

For the modification of measles and the prevention or attenuation of infectious hepatitis and poliomyelitis.

LEDERLE LABORATORIES DIVISION
AMERICAN Cyanamid COMPANY Pearl River, New York



1st

In Virginia

FIRST AND MERCHANTS
NATIONAL BANK OF RICHMOND
MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

Foot-so-Port Shoe Construction and its Relation to Weight Distribution



- Insale extensian ond wedge ot inner corner of heel where support is mast needed.
- Speciol Supreme rubber heels ore langer thon most anatomic heels ond maintoin the oppeoronce of normol shoes.
- The potented orch suppart construction is guaranteed not to break down.
- Innersoles ore guaranteed not to crack, curl, or callopse. Insuloted by o speciol loyer af Texon which olso cushions firmly and unifarmly.
- Foat-sa-Part losts were designed and the shoe construction engineered with orthopedic odvice.
- NOW AVAILABLE! Men's conduc'ive shoes. N.B.F.U. specifizat'ons. For surgeons and operating room personnel.
- By o speciol process, using plastic pasitive costs of feet, we moke more custom shoes for polio, club feet and oll types of obnarmol feet than any ather manufocturer.

Write for detoils or contoct your locol **FOOT-SO-PORT** *Shoe Agency. Refer to your Classified Directory*

Foot-so-Port Shoe Company, Oconomowoc, Wis.

1950 Cortone® | **1952 Hydrocortone®**
1954 'Alflorone' | **1955 Deltra®**

'Hydeltra' tablets

(PREDNISOLONE, MERCK)

2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

The organisms commonly involved in

Acute Pharyngitis



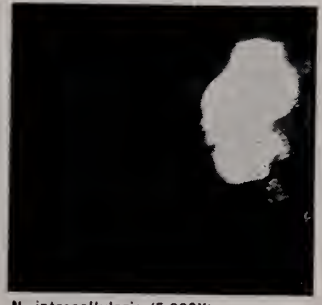
Strep. pyogenes (8,500X)



Staph. aureus (9,000X)



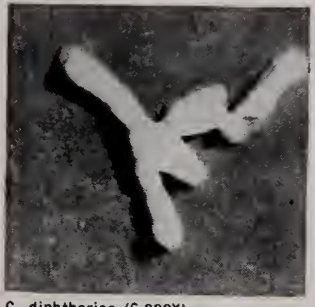
D. pneumoniae (10,000X)



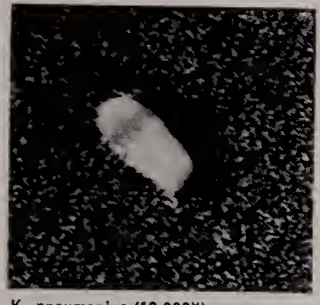
N. intracellularis (5,000X)



H. influenzae (16,000X)



C. diphtheriae (6,000X)



K. pneumoniae (13,000X)

Upjohn

ELECTRON MICROGRAPHS

***All* of them are included in the more than 30 organisms susceptible to broad-spectrum**

PANMYCIN*

HYDROCHLORIDE

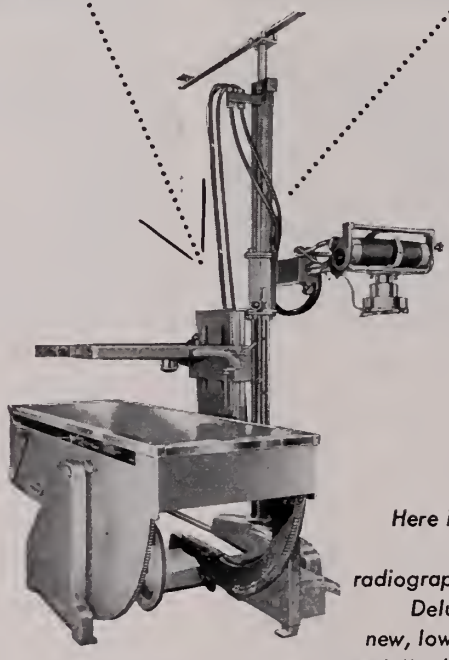
100 mg. and 250 mg. capsules • 125 mg. and 250 mg./tsp. oral suspension (PANMYCIN Readimixed)
100 mg./cc. drops • 100 mg./2 cc. injectable, intramuscular
100, 250, and 500 mg./injection, intravenous

*TRADEMARK. REG. U. S. PAT. OFF. — THE UPJOHN BRAND OF TETRACYCLINE

Only IN THE KELEKET
MULTISCOPE
X-ray Combination



ADVANCED DIAGNOSTIC FACILITIES plus HIGH KILOVOLTAGE



Here is everything in a single, space-saving diagnostic combination for advanced radiographic and fluoroscopic technics: Deluxe quality, ruggedness and convenience . . . new, low price . . . two-tube operation . . . yet especially designed for high kilovoltage technics . . . full-wave rectified . . . 200 MA capacity at 125 PKV. Write for free detailed literature today!

Kelly-Koett
The Oldest Name in X-Ray

KELEKET X-RAY CORPORATION
228-7 W. 4th St., Covington, Ky.

Call your local factory representative direct for Sales and Service

KELEKET X-RAY CORP.
Richmond, Va.
1303 Summit Ave.
Tel.: 84-4526

KELEKET X-RAY CORP.
4321 Harford Road
Baltimore 14, Md.

KELEKET X-RAY CORP.
226 Massachusetts Ave.
Washington 2, D.C.
Tel.: Nat'l. 8-4049

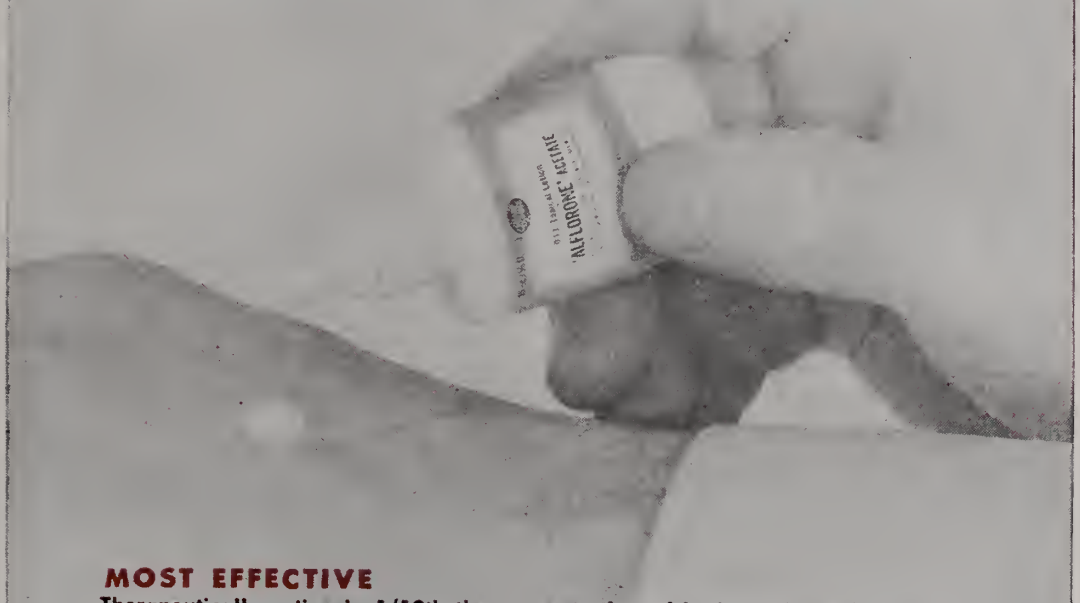
WEIGHT FOR WEIGHT,
THE MOST ACTIVE ANTI-INFLAMMATORY
AGENT YET DEVELOPED
FOR TOPICAL USE

TOPICAL LOTION

'ALFLORONE'

ACETATE

(FLUDROCORTISONE ACETATE, MERCK) 9 ALPHA-FLUOROHYDROCORTISONE ACETATE



MOST EFFECTIVE
Therapeutically active in 1/10th the concentration of hydrocortisone (Compound F).

MOST ECONOMICAL
Superior spreading qualities—a small quantity covers a wide area.

MOST ACCEPTABLE
Most patients prefer the cosmetic advantages of this easy-to-apply, smooth spreading lotion.

Supplied: Topical Lotion Alflorone Acetate: 0.1% and 0.25%, in 15-cc. plastic squeeze bottles. Topical Ointment Alflorone Acetate: 0.1% and 0.25%, 5-Gm., 15-Gm., and 30-Gm. tubes.

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

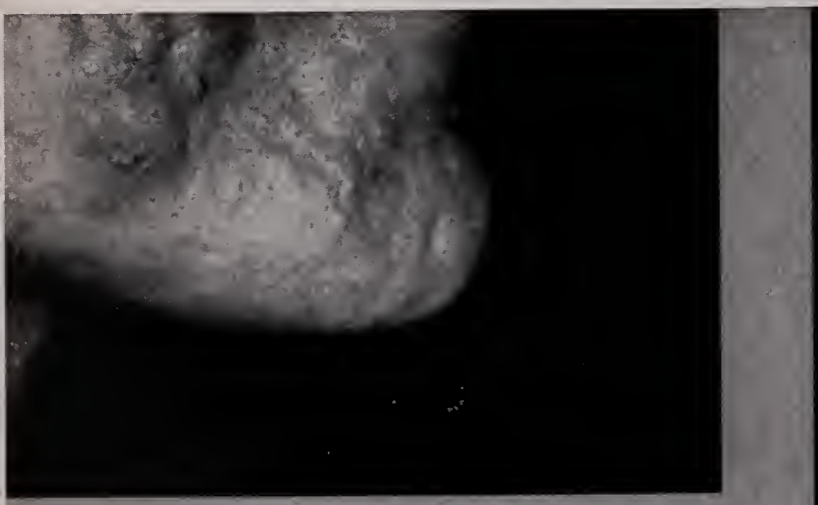
in **acne**
eczemas
dry skin

why not use the most effective vitamin A?



aqueous*
vitamin A is
a superior form
of vitamin A

aquasol A capsules



vitamin A
in high dosage
is effective
in many
hyperkeratotic lesions

*oil soluble vitamin A made water-soluble with sorethytan esters; protected by U.S. Patent No. 2,417,299.

samples and detailed literature upon request

u. s. vitamin corporation
(Arlington-Funk Laboratories, division)
250 East 43rd St., New York 17, N.Y.

better and more rapidly absorbed and utilized, better tolerated . . .

clinical evidence establishes (as shown in chart below) that aqueous vitamin A, as available in Aquasol A Capsules, provides . . .

up to 300% greater absorption
100% higher liver storage
80% less loss through fecal excretion

only **1/2** to **1/10** as much aqueous vitamin A is needed

	aqueous vitamin A**	ordinary oily vitamin A
acne	25,000 to 50,000 units daily	up to 500,000 units daily
eczema chronic	25,000 to 50,000 units daily	50,000 to 500,000 units daily
excessively dry skin	60,000 to 100,000 units daily	100,000 to 300,000 units daily

**Aquasol A Capsules (aqueous natural vitamin A) was one of the products used in these studies.

only **1/2** to **1/3** the treatment time is required for aqueous vitamin A

aquasol A capsules

three separate high potencies of natural vitamin A per capsule . . . in water-soluble form:

25,000 U.S.P. units **50,000 U.S.P. units** **100,000 U.S.P. units**



bottles of 100, 500 and 1000 capsules



for equanimity[1,2]

Equanil®

Meprobamate

(2-methyl-2-*n*-propyl-1,3-propanediol dicarbamate)

Usual dosage: 1 tablet, t.i.d.
Supplied: Tablets, 400 mg., bottles of 48.

1. Selling, L.S.: J.A.M.A. 157:1594 (April 30) 1955.
2. Borrus, J.C.: J.A.M.A. 157:1596 (April 30) 1955.

Wyeth®
Philadelphia, Pa.

new anti-anxiety factor with muscle-relaxing properties

relieves tension

*Trademark

in arthritis
and
allied disorders...



nonhormonal anti-arthritic

BUTAZOLIDIN®

(brand of phenylbutazane)

relieves pain • improves function • resolves inflammation

Employing the serum protein-polysaccharide ratio (PR) as an objective criterion of rheumatoid activity, it has again been shown that BUTAZOLIDIN "...produces more than a simple analgesic effect in rheumatoid arthritis."[1]

Clinically, the potency of BUTAZOLIDIN is reflected in the finding that 57.6 per cent of patients with rheumatoid arthritis respond to the extent of "remission" or "major improvement."[2]

Long-term study has now shown that the failure rate with BUTAZOLIDIN in rheumatoid arthritis, and particularly in rheumatoid spondylitis, is significantly lower than with hormonal therapy.[3]

(1) Payne, R. W.; Shetlar, M. R.; Farr, C. H.; Hellbaum, A. A., and Ishmael, W. K.: J. Lab. & Clin. Med. *45*:331, 1955. (2) Bunim, J. J.; Williams, R. R., and Black, R. L.: J. Chron. Dis. *1*:168, 1955. (3) Halbrook, W. P.: M. Clin. North America *39*:405, 1955.

BUTAZOLIDIN® (brand of phenylbutazane). Red coated tablets of 100 mg.

BUTAZOLIDIN being a potent therapeutic agent, physicians unfamiliar with its use are urged to send for literature before instituting therapy.

GEIGY PHARMACEUTICALS Division of Geigy Chemical Corporation
220 Church Street, New York 13, N. Y.
In Canada: Geigy Pharmaceuticals, Montreal

Geigy

S1155

Ménière's syndrome, cerebral arteriosclerosis, fenestration surgery, streptomycin toxicity



radiation therapy





narcotization



motion sensitivity in every form of travel



effective
control of
nausea
vomiting
vertigo

associated with labyrinthine dysfunction

BONAMINE* HCl

Brand of meclizine hydrochloride

Two convenient dosage forms . . . tasteless TABLETS (25 mg.) and mint-flavored, universally acceptable CHEWING TABLETS (25 mg.). Bonamine is ethically promoted. *Trademark

Pfizer PFIZER LABORATORIES, *Division, Chas. Pfizer & Co., Inc.,* Brooklyn 6, N. Y.



G-E MAXISERVICE®

gives you the x-ray apparatus you need with no initial capital investment

THIS is the way to bring your x-ray facilities up to date without knocking your budget out of kilter.

The G-E Maxiservice Rental Plan puts modern x-ray apparatus to work for you . . . lets you serve your patients more efficiently with equipment designed for the latest technics. Through periodic replacement feature, you can keep your installation always up to date . . . without "trade-ins."

One monthly rental charge includes repair parts, tubes, maintenance and local property taxes. It can be budgeted as operating expense against income from your installation. Your capital is not tied up in apparatus.

Ask you G-E x-ray representative about the Maxiservice Rental Plan.

Progress Is Our Most Important Product

GENERAL ELECTRIC

Direct Factory Branches:

RICHMOND — 3425 West Leigh St. ROANOKE — 202 S. Jefferson Street
BALTIMORE — 3012 Greenmount Ave. WASHINGTON, D. C. — 806 15th St., N.W.
NORFOLK — 218 Flatiron Building

the drug of choice

. . . as a tranquilizing (ataractic) agent in anxiety and tension states*

. . . in hypertension

RAUDIXIN

Squibb Whole Root Rauwolfia

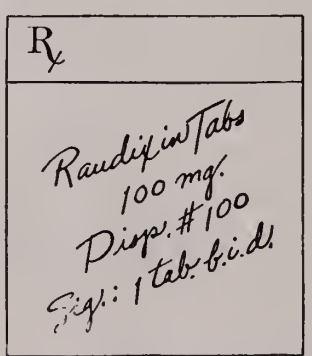
As a tranquilizing agent in office practice, Raudixin produces a calming effect, usually free of lethargy and hangover and without the loss of alertness often associated with barbiturate sedation. It does not significantly lower the blood pressure of normotensive patients.

In hypertension, Raudixin produces a gradual, sustained lowering of blood pressure. In addition, its mild bradycardic effect helps reduce the work load of the heart.

- **Less likely to produce depression**
- **Less likely to produce Parkinson-like symptoms**
- **Causes no liver dysfunction**
- **No serial blood counts necessary during maintenance therapy**

- Raudixin is not habit-forming; the hazard of overdosage is virtually absent. Tolerance and cumulation have not been reported.
- Raudixin supplies the *total* activity of the whole rauwolfia root, accurately standardized by a rigorous series of test methods. The total activity of Raudixin is not accounted for by its reserpine content alone.

Supply: 50 mg. and 100 mg. tablets, bottles of 100 and 1000.



*Ataractic, from ataraxia: calmness untroubled by mental or emotional excitation. (Use of term suggested by Dr. Howard Fabing at a recent meeting of the American Psychiatric Association.)

SQUIBB

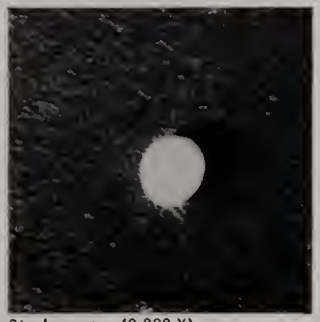
"RAUDIXIN"® IS A SQUIBB TRADEMARK

The organisms commonly involved in

Tracheobronchitis



Str. pyogenes (8,500 X)



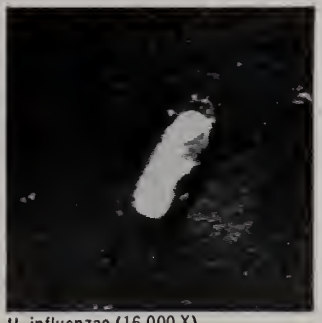
Staph. aureus (9,000 X)



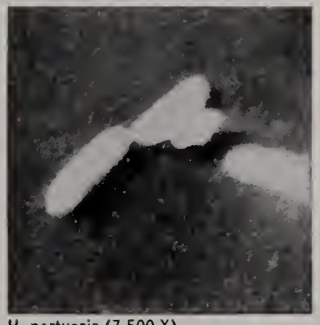
D. pneumoniae (10.000 X)



K. pneumoniae (13,000 X)



H. influenzae (16,000 X)



H. pertussis (7,500 X)

Upjohn

ELECTRON MICROGRAPHS

***All* of them are included in the more than 30 organisms susceptible to broad-spectrum**

PANMYCIN*

HYDROCHLORIDE

100 mg. and 250 mg. capsules • 125 mg. and 250 mg./tsp. oral suspension (PANMYCIN Readimixed)
100 mg./cc. drops • 100 mg./2 cc. injection, intramuscular
100 mg., 250 mg., and 500 mg. vials, intravenous

*TRADEMARK, REG. U. S. PAT. OFF. — THE UPJOHN BRAND OF TETRACYCLINE

when hormones

are preferred therapy...

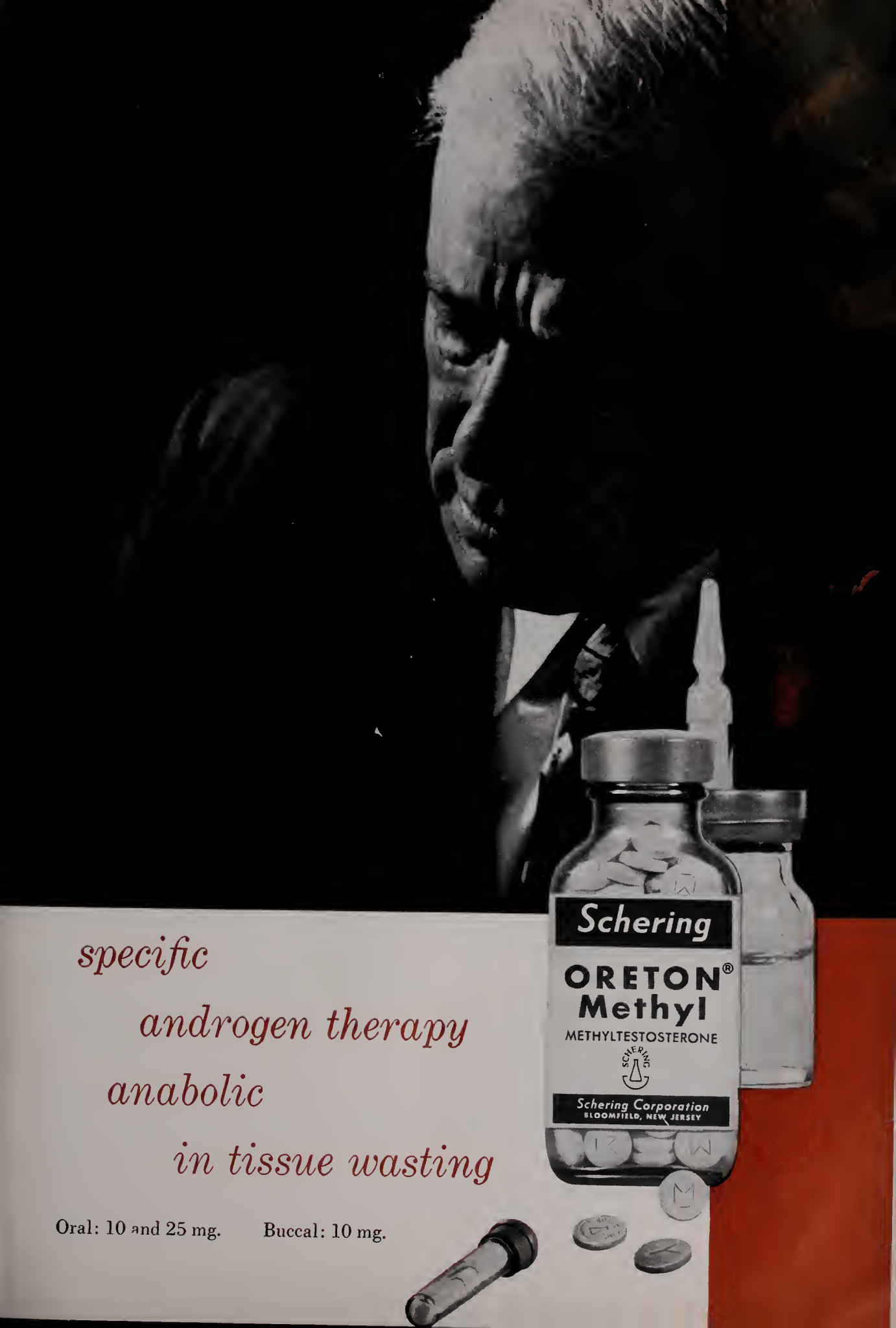
SCHERING HORMONES

assure superior quality

Schering's high standards and quality control assure products of unchanging potency and purity for uniform action and clinical efficacy.

minimal cost

Manufacturing know-how and continuing research by Schering provide preparations of highest quality at minimum cost.



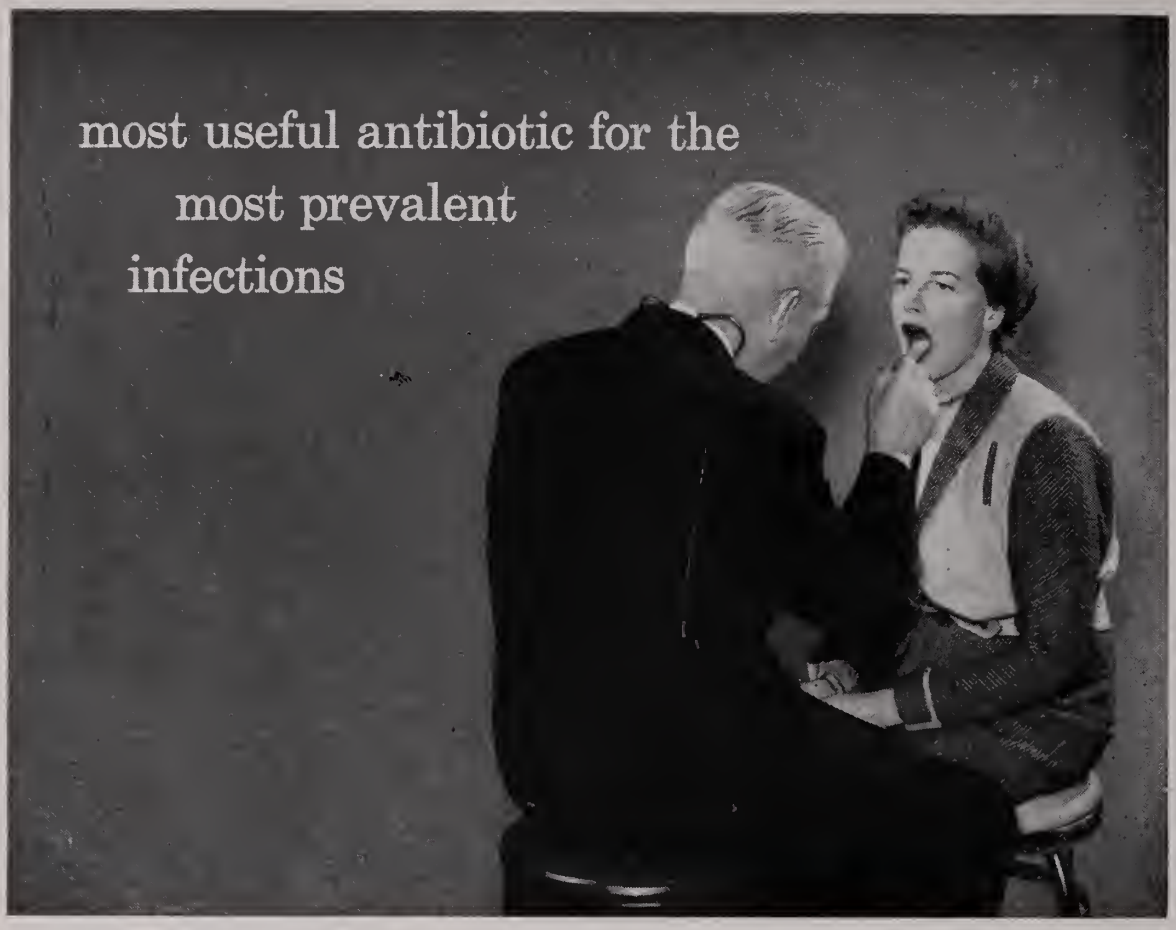
specific

androgen therapy

anabolic

in tissue wasting

Oral: 10 and 25 mg. Buccal: 10 mg.



532179

'Ilotycin'

(ERYTHROMYCIN, LILLY)

Over 96% of all acute bacterial respiratory infections respond readily

'Ilotycin' kills susceptible pathogens of the respiratory tract. Therefore, the response is decisive and quick. Bacterial complications such as otitis media, chronic tonsillitis, and pyelitis are less likely to occur.

Most pathogens of the respiratory tract are rapidly destroyed. Yet, because the coliform bacilli are highly insensitive, the bacterial balance of the intestine is seldom disturbed.

'Ilotycin' is notably safe and well tolerated. Urticaria, hives, and anaphylactic reactions have not been reported in the literature.

Staphylococcus enteritis, avitaminosis, and moniliasis have not been encountered.

Gastro-intestinal hypermotility is not observed in bed patients and is seen in only a small percentage of ambulant patients.

Available as specially coated tablets, pediatric suspensions, I.V. and I.M. ampoules.

Lilly

QUALITY / RESEARCH / INTEGRITY

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U.S.A.

The Virginia
MEDICAL
MONTHLY

November, 1955
Vol. 82, No. 11
Whole No. 1241

Trends In Public Health

WILLIAM P. SHEPARD, M.D.
New York, N. Y.

IT IS an honor to be included in this Public Health Meeting in a state whose public health history is so outstanding. The Old Dominion was the third state in the Union to have a State Board of Health established by the Legislature. This was in 1872, the same year in which the American Public Health Association was founded. My adopted State of California was the second, whose State Board of Health was established in 1870. Massachusetts was the first with a State Board of Health established in 1869.

Early pioneers do not always survive; some survive but fail to grow. The Virginia State Health Department under the leadership of a long succession of outstanding State Health Commissioners, of whom Dr. Shanholtz is the latest, has not only survived but has grown in its own health as it developed the health of the Commonwealth. It has been my privilege to have known and admired several of Dr. Shanholtz's predecessors, back to Dr. Draper.

Finally, it is always a pleasure to join with other people whose lives are dedicated, as mine has been, to the improvement of the health of the public and the reduction of premature deaths. If these discussions and deliberations are fruitful, they will mean still better health and longer life for all the people of this great Commonwealth.

I often wonder what it was originally that attracted each of us into the field of public health. I have inquired from many, yet have found no common spark which touched them all. The over-all incentive is clear, however. It is something which attracts us to the service of other people.

I have found no better description of what this intangible urge may be than that contained in an editorial by Norman Cousins in the Saturday Review of Literature of October 2, 1954.[1] It was written concerning Albert Schweitzer, who has certainly been motivated by the same urge which impels us. Mr. Cousins says in part: "It matters not to Schweitzer or to history that he will be dismissed by some as a do-gooder or as a sentimental fool who fritters his life away on Africans who can't read or write. 'Anyone who proposes to do good,' he wrote, 'must not expect people to roll stones out of his way but must accept his lot calmly if they even roll a few more upon it. For the tragedy of life is not in the hurt to a man's name or even in the fact of death itself, the tragedy of life is in what dies inside a man while he lives—the death of genuine feeling, the death of inspired response, the death of the awareness that makes it possible to feel the pain or the glory of other men in oneself.' Schweitzer's aim is not to dazzle an age but to awaken it, to make it comprehend that moral splendor is part of the gift of life, and that each man has unlimited strength to feel human oneness and to act upon it. He has proved that although a man may have no jurisdiction over the fact of his existence, he can hold supreme command over the meaning of existence for him. Thus, no man need fear death; he need fear only that he may die without having known his greatest power—the power of his free will to give his life for others."

To me this is the very essence of the dreams and aspirations of the public health worker. Although he may not often be called upon to give his life in the sense of death from a laboratory infection, and although he is frequently unhonored and unsung by his fellow men, yet he has that deeper satisfaction of which Schweitzer speaks, of having done some good for his fellow man so far as lies within his powers.

I have been asked to speak on the newer trends

WILLIAM P. SHEPARD, M.D., *Second Vice-President, Metropolitan Life Insurance Company; Chairman, Council on Industrial Health, American Medical Association.*

Presented to the Virginia Public Health Conference, Roanoke, Virginia, May 11, 1955.
Received for publication, May 25, 1955.

in public health, and I shall take pleasure in doing so. But if there are newer trends in public health, the inference is that there are also older trends, and I would ask your indulgence to speak of them first, and very briefly, for one simple reason. It is obvious that no structure can be built on old, if the old foundations crumble. We have gradually over the years developed a firm foundation for the successful protection of the health of all the people. These are nowadays commonly known as the basic seven public health functions. Every community is entitled to them regardless of its size or location. Even the smallest health department carries out the same functions with only a doctor, nurse, sanitarian, and clerk. In the larger health departments this personnel may be multiplied many times to carry out these basic functions. It has been demonstrated over the years that they are a good investment and can be purchased at a reasonable and limited cost. They are just as good an investment today as they were when the Virginia State Board of Health was organized.

Our records on the self-appraisal form of the American Public Health Association show that there are many areas in the country today, even though equipped with a full-time county health department, which are not receiving the full benefit of these seven basic functions because they are not well done. It is incumbent upon us here today before considering new trends to make sure that we are building upon a solid foundation.

The first of these basic services is vital statistics. In your county do they constitute an accurate record of births, deaths, and causes of death and disability? Are vague or indefinite causes of death queried? Is constant effort made to keep these reports as complete as possible, and are they tabulated frequently as administrative guides?

The second of the basic functions of any health department is environmental sanitation. Is this basic function directed by or does it have ready access to competent, modern sanitary engineering guidance? Does the one responsible for this function sit with the health officer as a member of his administrative council or team? Is this function guided by the modern concepts of environmental control which, in addition to practical safeguarding of water, sewage, and food, also includes atmospheric pollution, stream, lake, and beach pollution, proper disposal of industrial wastes? Does it include the engineering aspects of environmental safety in homes, streets, and work places?

The third of the basic functions is laboratory services. Whatever the laboratory's limitations, is it prepared to supplement these by recourse to a state or university laboratory on special problems? Is it a real service unit to all members of the department, as well as to the physicians in the area? Is the laboratory director a member of the health officer's council or team?

The fourth of the basic functions is disease prevention, variously known as epidemic control, epidemiology, etc. Is this function based on the modern concept of seeking effective means of reducing all preventable deaths, disease, and injury? Is it applying the classical methods of epidemiology to the study of accidents, to diabetes, cancer, heart, and other chronic diseases? Is it alert to, and effective in dealing with the remaining problems of tuberculosis and venereal disease control?

The fifth of the basic functions is maternal and child health. Does this function receive from vital statistics careful tabulations of the chief causes of morbidity and mortality among mothers and children? Are these tabulations specific enough to pinpoint the major problems according to age, sex, race, residence, school, hospital? Is it the basic concept of this function that the major purpose is to improve the health and safety of mothers and children by full use and improvement of existing community facilities, such as physicians, hospitals, schools, day nurseries, foster homes, voluntary agencies, etc.

The sixth of the basic functions is health education. Health education based on modern methods of education and community organization is helping existing groups and natural leaders identify their health and safety problems, then helping to solve them. Are these methods learned and used by the department's physicians, nurses, inspectors, nutritionists, safety people, correspondents, and all others coming in contact with the public? Are modern health education methods used in preparing material such as pamphlets, posters, exhibits, and annual reports, bulletins, circular letters, speeches, films, and slides?

The seventh and last of the basic functions is administration. Regardless of the scope of his duties, does the health officer appreciate the value of the team approach? Does he regard his chief staff members as an advisory council or team who should be encouraged to participate in policy making? Does he recognize that one of the major responsibilities of an administrator is to provide an environment in which his staff can do their best work? Does he assume a position of leadership and cooperation with the voluntary health agencies, looking upon them as his allies, defenders, and constructive critics?

I have taken your time to review these fundamental basic functions in the hope that before we consider taking on new functions we shall make sure that our people in each jurisdiction are getting at least this minimum of good basic services. I have taken the time to ask one or two cogent questions under each of the functions in the hope that they might all be answered positively and affirmatively before we take on new work. I have done this because I have more than once seen the sad spectacle of discontinuing or neglecting one or more of these basic functions, because of becoming enamored with a new one. And out goes the baby with the bath!

If we may now assume that the basic functions are operating effectively and at their maximum efficiency, let us then be sure that we are alert to the desires and ever-changing problems of the people, and that we recognize the new problems in public health and preventive medicine as they come along. If we do not, we stand in the quandary of the ameba, described by one "Alex" apropos of an editorial in the New England Medical Journal of March 3, 1955.[2] It is entitled "Soliloquy in a New England Mill Pond."

"I never wander from the norm.
I gladly procreate.
But since I am amebiform
I somehow hesitate.

"I often linger on the brink
While I reappraise.
I sit and think and think and think
For days and days and days.

"Now fission comes as no surprise
For I invented it.
But nonetheless I agonize:
To split or not to split?

"I am more than willing to divide—
I'd even turn to three.
The thing I never quite decide
Is what becomes of ME?"

Are we afraid to encourage growth in our program which may require some reorganization, for fear of "what becomes of ME?"

One of our most pressing problems in the public health field today is in the realm of geriatrics and chronic illness. The average length of life in this country today is close to the biblical four score and ten. At the beginning of this century it was only about 47 years. This is an amazing victory for the health professions. And there is no reason to contemplate that the average life span will not continue to increase for some time to come. Thus we find ourselves in the predicament that the success of the public health program has prolonged life to such an extent that we face new preventive problems among the aging.

Bear in mind that this is not solely a medical problem. It is largely economic and sociological. In our effort to solve the health problems of the aging, it is important for us to keep in touch with those who are specialists in the study of economics and sociology, among the aging.

Cardiovascular-renal diseases, plus cancer, both of them largely diseases of old age, now account for two-thirds of our total deaths throughout the nation each year. This is a challenge too great to be overlooked by those of us who have spent our professional careers in reducing unnecessary deaths.

The cardiovascular diseases are indeed a puzzling problem in which we need much further research. Our job is to stimulate that research and to apply it as rapidly as it becomes generally accepted and is proved effective. The great bulk of these diseases seem to be directly related to arteriosclerosis about which we know relatively little. We do not know with certainty what causes the gradual deterioration of the arterial system causing hardening and thickening in some of the arteries, softening and increased fragility in others. We do not know why these defects of the arteries occur earlier in some, later in others. We do not understand why one area, such as the coronary system, or the circle of Willis in the brain, or the very fine vessels in the retina of the eye, may be the only ones to show these degenerative changes.

Much research is being done in these fields, and we may have some answers before too long. Meanwhile, about all we do know concerning this great bulk of the cardiovascular deaths is that they are much more common among those adults who are aging and who are over their normal weight. Among some markedly overweight people deaths from certain causes may be three times the normal. We also know on pretty good evidence that those who are overweight and who reduce to normal re-attain a relatively normal death rate.[3]

With these facts at hand, it seems logical therefore to turn our health education efforts toward weight control, especially for those who have attained middle age. Thus a great many health departments and innumerable voluntary agencies are organizing classes for weight control, issuing informative booklets and sound advice on reducing diets, and in general doing what they can to reduce this important cause of death.

As to the other cardiac diseases, not so directly

associated with arteriosclerosis, we have already had great success in two major groups—namely, syphilis and acute rheumatic fever. Deaths due to acute rheumatic fever have reduced over 70 per cent in the past 10 years, while cardiac deaths due to syphilis likewise show a gratifying decrease. We might add a third group of former cardiac deaths in which great reductions are noted—that is, those due to the acute infectious diseases.

In the cancer problem lies another of our greatest challenges. Here, again, we do not know the cause or means of prevention. We do know, however, that a sizeable portion of the lives now lost can be saved by modern methods of health education and health administration. Motivating people past middle age to have an annual check-up is already proving effective in a large proportion of cancers which are easily detectable and removable.

Another direction into which health departments and other health agencies may well expand is the field of safety. Safety education is practically synonymous with health education. The control of accidents resembles the control of many of the acute infectious diseases: we must first depend upon the engineers to correct faulty environment—that is, unsafe highways, streets, vehicles, work places, and homes. When the engineers are all through and have done the best they possibly can in this environmental job of the utmost importance, there still remains a large residue of accidents at home, on the highway, and in the work place, which are traceable to nothing else but human behavior. This is a medical-psychological problem upon which we still need much investigation and research. What makes an accident-prone person that way? Are certain persons always accident-prone? Or does this defective aberration come and go, and perhaps strike us all at times? What are the causes of the emotional unbalance which seem to precede most accidents?

Among the several categories of accidents, those in which the health department and voluntary health and safety agency has the most legitimate interest and responsibility are those occurring in the home and those among children. Accidental deaths in the home and its immediate environs are almost, though not quite, equal in number to those occurring on our highways. No other agency of government, not even the police department, has more ready access to the home than does the health department through its public health nurse, its inspectors, and its social service workers. Few if any agencies of government have so direct an access to the home-makers of the community as does the Health Department. Probably no other agency of government has better facilities or more know-how in the field of education—in this case, safety education—than does the health department. As Dr. Chapman has pointed out,[4] the time is long overdue when health departments should develop a safety program.

There are other new trends in public health, among them occupational health, about which I should like to say something, if time permitted. But I cannot close without mentioning a field in which health departments will legitimately become more and more concerned. That is what we call the field of mental hygiene or mental health. Here, as in the cardiovascular diseases, we are sailing an uncharted sea. It is one in which basic fundamental knowledge is still lacking with regard to prevention, but it behooves all of us to keep in close touch with the promising researches being conducted in this field. Actually there is probably no greater health problem facing the nation today than that of mental health. The State of New York devotes nearly one-third of its total budget to the care of patients in mental hospitals, and this by no means includes all mental patients. Even at that, the State institutions are over-crowded, and a bond issue of 350 million dollars is contemplated to relieve congestion and take better care of the State's mentally ill. In industry the ravages of emotional instability can hardly be measured, but, according to Ling,[5] mental and emotional disturbances cause more absenteeism, more disability, more inefficiency, and general unhappiness than all the other causes of absenteeism put together. Why is it, asks Ling, that a young man in a factory will loaf all he can during the working hours, will take no pride in the perfection of his job, will be absent or tardy as much as he can, and, in general, show no interest in his work, while the minute the whistle blows he is the first out of the gate and on to the baseball diamond where he plays a superb game for several hours, showing great skill, strength, speed, ingenuity, and intelligence?

It must be 20 years ago since Professor C. E. A. Winslow predicted that the time would come when health departments would spend as much for the prevention of mental illness as for the prevention of all other diseases. While we in public health have been waiting for the psychiatrists to come to some common agreement concerning the cause and prevention of mental disorders, a few basic principles seem to have emerged. One is that emotional immaturity or imbalance is common, and that it is usually unrecognized by the sufferer. Another is that the sufferer can rarely help himself, but needs the friendly

and "permissive" assistance of another, be it physician, psychiatrist, clergyman, sympathetic spouse, or friend. Another is that emotional disturbances are more easily treated when detected early, preferably in childhood. Still another which is most encouraging is that the average intelligent public health worker, physician, nurse, social worker, health educator, teacher, and others, can, by study and some assistance, become well enough oriented in the field so that they may be helpful to the sufferer. Too often we unwittingly aggravate the sufferer's problems. It behooves all of us in the field of preventive medicine and public health to become oriented in mental hygiene and to be ready when the time comes to apply the preventive measures which will eventually and inevitably develop.

To summarize, I have pointed out that new programs in public health must always be built upon firm foundations and that it is unwise to develop new functions until the basic functions to which every community is entitled are well cared for.

Among the major new trends in our field is that of geriatrics and the chronic diseases. The health professions are responsible for the greatly increased span of human life. The public, therefore, has the right to look to us to help make those added years as happy, productive, and healthy as possible.

An urgent challenge before every health department is the matter of home and child accidents. Health departments are better equipped than any other branch of government to apply the remedy indicated: safety education.

Prevention of mental disorders is still in its infancy, but is increasingly promising. Until we know more about the actual prevention of frank illness, there is much we can do by applying the simple principles of sympathetic understanding to the many thousands whose emotions are responsible for altogether too much illness, disability, inefficiency, and unhappiness.

It has been a pleasure to have this time with you. It will be an even greater pleasure to participate with you during the deliberations of the next two days.

References

1. Cousins, Norman: Point About Schweitzer. Saturday Review of Literature, October 2, 1954, 37: pp. 22 and 23.
2. Editorial—Amo, Amas: New England Journal of Medicine, March 3, 1955, 252: pp. 368-369.
3. Dublin, L. I., and Marks, H. H.: Mortality Among Insured Over-Weights in Recent Years. Transactions of the Association of Life Insurance Medical Directors of America, 35: pp. 235-263, 1952.
4. Chapman, A. L.: An Epidemiological Approach to Traffic Safety. Public Health Reports, Aug. 1954, 69: pp. 773-775.
5. Ling, Thomas M.: Mental Health and Human Relations. London, H. K. Lewis, 1954.

One Madison Avenue.

Films Available.

A revised list of films available through the A.M.A. motion picture library has been prepared and copies are available upon request from the Committee on Motion Pictures and Medical Television of the American Medical Association. This catalog lists 83 medical films suitable for showing to medical societies, hospital staff meetings and other scientific groups. The catalog also includes 36 health films of interest to physicians who may be called upon to speak before lay audiences such as service organizations, Parent-Teachers' Associations etc.

The Diagnosis and Treatment of Chronic Subdural Hematoma

JOHN M. MEREDITH, M.D.
Richmond, Virginia

NOT rarely in the morgues of large general hospitals, to quote Ver Brugghen[1], cases of unexpected chronic subdural hematoma come to the post-mortem table. The various and extraordinary diagnoses made only indicate the complexity and difficulty of diagnosis in these cases. Particularly in minor head injuries, this insidious lesion may lurk in the background and finally appear, unexpectedly, and perhaps tragically. It has been said by experienced clinicians that when one least expects to find a chronic subdural hematoma at operation it may appear, and, likewise, when it is suspected preoperatively, it often is absent, while the real lesion is brain tumor, brain abscess or other expanding lesion.

I well recall, some eighteen years ago, operating during most of one Christmas Eve on a middle-aged patient (colored male) who turned out to have a large chronic subdural hematoma over the left cerebral hemisphere. The patient's wife repeatedly denied any history of injury but she finally admitted that he was wont to become intoxicated on occasion and during a certain stage of the intoxication he was accustomed to beat his head violently against the wall. Certainly, sufficient trauma was induced by this behavior to produce a chronic subdural hematoma!

Correct diagnosis of chronic subdural hematoma prior to operation is often difficult. Although there is a rather definite clinical pattern to the typical case, there are many variable factors which may lead to error. For instance, a minor injury may be forgotten, or, when seen, the patient may be too confused to give a good history, or he may have been intoxicated when the head injury occurred and the possibility of trauma may not be entertained. Undoubtedly many patients die in our mental hospitals of chronic subdural hematoma (these patients are notoriously subject to head injury) under the mistaken diagnosis of psychosis and the like, the true pathology never being disclosed unless post-mortem examination is carried out.

The lesion usually is preceded by head trauma of a relatively mild nature, and, if a history of alcoholism or mental disease is present, we disregard these latter conditions entirely and treat the case as one of suspected subdural hematoma, if there is history of head trauma. The patient may have been unconscious only a few moments, if at all. Following a mild blow on the head, the injured person may go about his work for weeks or even months before chronic and persistent headache is noticed and neurological symptoms (such as diplopia, convulsions, weakness of one arm and leg and increasing stupor) develop to demonstrate the presence of a serious intracranial lesion. Curious mental reactions are often demonstrated in that a miser becomes extravagant or a mean-tempered individual becomes an expansive extrovert overnight. One individual in our series of chronic subdural hematomas amused himself by driving through a mile or two of red lights on a city street before he was apprehended by the police who realized he was ill and not intoxicated and brought him to the hospital emergency room.

The insidiousness of the condition and ease with which the lesion may be completely overlooked, either in the acute or sub-acute phase and *particularly in the chronic phase*, cannot be emphasized too strongly. Often these patients are elderly and are admitted in a dehydrated state with a history of or question of incipient uremia, possibly with *definite elevation* of the blood urea nitrogen. A history of trauma often is elicited only with the greatest difficulty on repeated inquiry of the patient or his relatives; tragically, the *possibility* of past trauma in such cases may be overlooked entirely by the physician.

The spinal fluid pressure is often normal in these patients (150 millimeters of water or less) with chronic subdural hematoma and even below 100 millimeters of water. There may or may not be choked discs present. On many occasions in our clinic, because of a suspicious history, burr openings are made and no subdural hematoma found. A ventriculogram may then be carried out at that time which may demonstrate a space-consuming lesion of the brain, such as tumor, cyst or abscess. *Spontaneous* subdural hematomas have been described, but they are very rare in *adults*; with the exception of indirect trauma to be mentioned later, they are, in our opinion, almost always due to a direct blow on the head, however mild.

From the Department of Neurological Surgery, Medical College of Virginia, Richmond.

Read in Neurological Symposium as part of McGuire Lectureship Program, December 3, 1954, in Richmond, Virginia.

Received for publication June 1, 1955.

Every neurosurgeon of experience has observed more than one case in which a ventriculogram was initially planned in suspected brain tumor, only to have disclosed an unsuspected subdural hematoma when the burr openings were made. The rather trivial injury in such patients often occurs in the antero-posterior direction which, it is thought, agitates the brain more than a lateral blow on the head, thus enabling the short connecting veins between the cortex and the dura to tear and produce a large chronic subdural hematoma.

In at least fifteen per cent of cases, the hematomas are *bilateral* so that we invariably make *bilateral* burr openings in surgical exploration. It is possible to have hemiplegia on the *same* side as the subdural hematoma. This is explained by the fact that the large hematoma may compress and distort the brain toward the opposite side, thus causing the crus cerebri on the contralateral side to impinge on the sharp edge of the incisura, with resultant hemiplegia on the *same* side as the clot.

It has been emphasized by a number of writers that when these patients do poorly post-operatively or succumb, it is often due to failure of the greatly compressed cerebral hemisphere or hemispheres to *re-expand.* There is, in fact, cerebral hypotension and not hypertension, post-operatively, as a rule. We recall one individual treated here over a decade ago who had large bilateral subdural hematomas removed and who had fluctuating symptoms post-operatively to the extent that he was re-operated upon and no further hematoma found. After a number of weeks he succumbed and post-mortem examination showed no evidence of the original hematomas, but did show much softening due to thromboses in the pons and brain stem generally. This frequently occurs in fatal cases as emphasized by the pathologists. Therefore, we often give these patients intravenous fluids of *hypotonic* strength, such as 0.5% sodium chloride for several days post-operatively, in an effort to aid the greatly compressed brain and its blood vessels to re-expand.

These patients often are liable to marked *pulmonary complications,* as recognized by the late Dr. C. C. Coleman and by Dr. W. B. Porter of this institution more than twenty years ago. There is a peculiar and significant connection between the marked comatose state in chronic subdural hematoma and the development of pulmonary complications such as atelectasis and excessive formation of mucus in the lungs post-operatively.

Craig and Miller,[2] of the Mayo Clinic, have recently analyzed 163 cases of acute or chronic subdural hematoma treated in that institution. They found that an interval of three to five months would often elapse between the time of head injury and the occurrence of disabling symptoms. The leading symptoms which brought the patient to seek medical aid were headache, coma or drowsiness, psychosis, weakness of one or both sides of the body and visual disturbances of one type or another. Chronic papilledema was found in one-third of the patients and homonymous visual field defects in a few. A dilated pupil on the side of the hematoma is considered the most important localizing sign, although those with great experience with this lesion have found that occasionally the dilated pupil will be on the side *opposite* to the hematoma; hence the importance of making *bilateral* superior temporal dural openings in all cases of suspected subdural hematoma. Convulsions occurred in approximately ten per cent of Craig and Miller's series. They were more frequent in the *older* patients. They may be Jacksonian in type, or generalized. The occurrence of convulsions did not necessarily indicate that the patient's condition was deteriorating rapidly. Skull films may or may not show a fracture; usually, *no fracture* is present. A shift of the pineal gland (seen on the A-P skull film) is highly significant in cases of suspected subdural hematoma. Oldberg[3] believes that such a shift is more frequently caused by a subdural hematoma than by any other intracranial mass lesion. Air injection, if carried out, is highly typical of a chronic subdural hematoma and an experienced roentgenologist can often decide pre-operatively that a subdural hematoma is the probable cause of the characteristic ventricular shift. There may be calcification in the membrane of a subdural hematoma which will be seen on plain x-ray films of the skull. Thinning of the skull or even erosion of the skull over a subdural hematoma has been reported in the literature by Engeset[4] and also by two members of our own clinic. *Thickening* of the skull overlying the lesion also has been noted on plain films.

In one case, reported by Craig and Miller, the subdural hematoma was in the *posterior fossa.* Ventriculography had revealed symmetrical dilatation of the ventricles and exploratory operation over the cerebellum disclosed a large subdural hematoma. The patient made an uneventful recovery after the operative removal of the clot. Peet[5] stated that in one infant he had found a subdural hematoma covering the posterior surface of both cerebellar hemispheres. A similar case in an infant was recorded by Coblentz[6] of the University of Maryland a num-

ber of years ago, and extradural hematomas in the posterior fossa have been reported by Coleman and Thomson[7], by Campbell and his associates[8], and others.

There has been much discussion concerning the true nature of chronic subdural hematoma. It is well known that most subdural hematomas result from rupture of communicating veins between the cortex of the brain and the under surface of the dura or the dural sinuses. On the other hand, some pathologists, including Kernohan[9] of the Mayo Clinic, have demonstrated that a subdural hematoma can be an *intradural* lesion and can be caused by hemorrhage *between the dural layers,* the inner layer of the dura acting as the membrane of the lesion.

In recent years, direct surgical attack on intracranial aneurysms has disclosed that occasionally a surgically important subdural hematoma results from initial *arterial bleeding* from an aneurysm in the region of the circle of Willis, the middle cerebral artery, or even a cortical aneurysm on the surface of the brain. We recently had such an experience in a middle-aged woman, causing us to modify our earlier thinking that subdural hematoma comes *only* from venous bleeding following head trauma in adult cases. This patient had a typical onset of spontaneous sub-arachnoid hemorrhage as from a bleeding aneurysm with sudden headache and painful spastic neck. High choked discs developed and eventually a ventriculogram and craniotomy were done with evacuation of a large chronic subdural clot over the right hemisphere. The thrombosed cortical aneurysm from which the hemorrhage occurred was clearly visible on the brain surface (fronto-temporal region) immediately after the hematoma had been removed.

In many cases, *severe* injury to the head will not be followed by subdural hematoma as the brain will undergo swelling and edema immediately after the injury. Because of the occasional finding of laminated solid blood clot in a subdural hematoma it has been suggested that *recurrent* bleeding may occur. Gardner,[10] Munro and Merritt,[11] and others, have expressed the opinion that the slow increase in size of a subdural hematoma may be due to the development of fluid within the subdural membrane which is high in protein content, being caused by the breakdown of erythrocytes in the hematoma, which produces a body of fluid surrounded by semi-permeable membrane having the ability to draw fluid into the sac by reason of its high osmotic pressure. This drawing of the fluid into the sac by osmotic pressure has been said to be the cause of the *fluctuation* of the symptoms and increase in the size of the liquid clot with the lapse of time commonly present in cases of chronic subdural hematoma.

Cooney and Baker[12] recently reported a case in which an intracranial subdural hematoma developed after removal of a large tumor from the lumbar area of the spinal canal. These authors expressed the opinion that a large reservoir of cerebrospinal fluid was maintained in the area formerly occupied by the solid lumbar tumor, and, as the fluid left the subarachnoid space and ventricles, the brain was distorted, tearing a surface vessel, thus allowing the blood to accumulate in the intracranial subdural space. Subdural hematomas have been reported (Bucy[13]) after pneumoencephalography. Also, the writer has heard descriptions at medical meetings of subdural hematomas developing after dividing the eighth nerve in the posterior fossa for Meniere's disease in the sitting position, apparently the brain sagging to such an extent during the opening of the dura over the posterior fossa and the evacuation of the cisterna magna and cisterna lateralis, that a short communicating subdural vein tears over a cerebral hemisphere, producing an enormous subdural hematoma several weeks after operation. Fatalities have occurred from this complication.

In cases of subdural hematoma, the electroencephalogram is abnormal in a large number of cases, the most frequent abnormality being a delta rhythm[2] and occurring over the entire brain area, or over the clot itself.

We have had several instances of *unusual types* of subdural hematomas. We have also had some experience with subdural hematomas in infants. These remarks will be concluded with a brief discussion of some interesting clinical variations of this very important lesion.

Chronic Subdural Hematoma in Infants

As Peet[5] stated many years ago, the term "chronic subdural hematoma" is considered by most authors to be synonymous with Virchow's "pachymeningitis hemorrhagica interna." The latter term is now considered a misnomer. One of the earliest papers which clarified the correct pathogenesis of these lesions was that of Putnam and Cushing,[14] published in 1925. Cranial trauma, usually mild in character, is certainly the etiological factor in practically all of the *adult* cases. In children, however, subdural hematoma undoubtedly occurs in the *absence of trauma,* such as in debilitating diseases, certain forms of meningitis, and vitamin deficiency. Malnutrition with lack of vitamin C and subclinical scurvy are evi-

dently contributing factors, especially in infants. We have recently operated on such an infant in our clinic. Chronic subdural hematomas in infants have often been overlooked because of the close similarity to the clinical picture of congenital hydrocephalus. Trauma, usually at birth, is probably the most important etiological factor in the absence of gross vitamin deficiency. It has been emphasized by a number of writers that subdural hematoma in infants is usually associated with poor social and nutritional background. Many of the infants are illegitimate, most of them are artifically fed and have definite x-ray evidence of scorbutic bone changes. Often the appearance is that of a congenital hydrocephalus, but typically the infant does not have the classical downward gaze that most congenital hydrocephalics have, and, also, the parietal bosses are more likely to be prominent in the subdural hematoma cases with less prominence of the frontal bones than seen in the hydrocephalics[5]. Bucy[15] has stressed that in chronic subdural hematoma in infants, the prominence of the *parietal bones* is usually out of all proportion to the increase in size of the rest of the head.

The diagnosis may be quickly established in an infant by making bilateral subdural taps with an 18 gauge lumbar puncture needle in each lateral angle of the anterior fontanel as emphasized by Ingraham and Matson[16]. However, a negative tap does not always exclude a surgically important hematoma, which we have found on several occasions far down over the temporal lobe and missed entirely by the preliminary taps through the anterior fontanel. Furthermore, in infants is a peculiar tendency seen, so that, even though the hematoma is successfully evacuated, a block of the ventricular fluid circulation may develop to the extent that an internal hydrocephalus is found post-operatively after several weeks, either of the communicating or obstructive type. In such a case, some type of artificial shunt with a plastic or rubber catheter is eventually required before relief of the intracranial hypertension and ventricular distention is achieved. Sometimes, repeated bilateral fontanel taps will suffice to evacuate a liquid subdural clot but usually we make superior temporal burr openings or even turn down small bone flaps, for we believe it is more important in *infants,* particularly, than in adults, to remove the *inner membrane* of the clot which encases the underlying cerebral hemisphere so firmly that it may tend to retard the normal development of the hemisphere with resulting mental and physical deficiency. The size which a subdural clot may attain in an infant is truly remarkable.

The differential diagnosis, as stated previously, can usually be made in an infant by introducing a needle into the subdural space through both lateral angles of the fontanel. If a subdural hematoma is present, a bloody or xanthrochromic fluid will be obtained with the blood often being distinctly old with crenated red cells. Regardless of what one feels about the desirability or wisdom of operating on most cases of far-advanced congenital hydrocephalus seen in pediatric or neurological clinics, one should never withold at least bilateral anterior fontanel taps in any case of an infant with an enlarged head or so-called "water head" to exclude the possibility of a rather easily curable chronic subdural hematoma. Of course, the brain in such infants with the latter lesion, is *not large at all* as it is in the infant with congenital hydrocephalus, but the cerebrum is actually *small* with the subdural hematoma compressing it from above. In all probability, many cases of infantile subdural hematoma will be considered to be congenital hydrocephalus if not investigated by the simple procedures previously outlined. In view of the excellent results which can be obtained from surgical treatment of chronic subdural hematoma in most cases, this error in diagnosis is regrettable, to say the least.

Chemical studies have proved that the brownish or bluish discoloration of the membrane found in chronic subdural hematoma is due to bile salts which are formed from hemoglobin by cells of the reticuloendothelial system in the meninges. The same problem is present in infants as in adults with respect to the greatly condensed cerebral hemisphere or hemispheres. The infant is usually kept flat in bed or even the foot of the bed is elevated post-operatively to enhance expansion of the brain, and hypotonic saline solution is administered intravenously. It has even been suggested that Ringer's solution be injected into the lumbar subarachnoid space by lumbar puncture needle post-operatively so that eventually this will produce elevation of the cerebral hemispheres and bring them tightly against the dura, thus eliminating the dead space left by removal of the clot.

Chronic or Subacute Subdural Hematoma Due to *Indirect* Trauma

Recently we have had the experience of operating on two cases with large chronic subdural hematomas due to indirect head trauma[17]. In both instances, there was a history of a heavy fall on the buttocks, with no record of a direct blow on the head. The

patients and their families were of a high degree of intelligence and the histories could be accepted as reliable.

Loyal Davis[18] had also mentioned a fall on the buttocks as the only known cause of trauma in certain cases of chronic subdural hematoma in his experience. Such lesions are undoubtedly rare. Wechsler[19] and others have referred to certain subdural hematomas that have occurred after *blast injuries* up to one hundred feet distant on the ground or even under water, in which there had been no direct head injury, except by the pressure wave. Grant[20] has reported a subdural hematoma caused by the relatively mild trauma from ocean breakers while surf bathing.

In both of the cases treated in our clinic, a 54-year-old white woman and a 64-year-old white man, the hematoma was on the left side and removed through simple burr openings, followed later by a subtemporal decompression and evacuation of additional solid portions of the clot and membrane, with recovery in each instance[17].

Therefore, we have now modified our thinking to conclude that subdural hematoma can occur from *indirect* head trauma, such as falls or severe jars in which there is no direct blow on the head.

Chronic Subdural Hematoma Causing Erosion and Actual Perforation of the Overlying Dura and Skull, Demonstrable Roentgenologically.

We have had only one instance of this unusual pathological finding, i.e., that of a 32 year old colored man, operated upon by our resident at the time, Dr. George Gish, Jr., in 1951.[21] This patient actually had *three* chronic subdural hematomas, two separate ones on the left side in the frontal and parietal regions and another on the right side in the frontal area. What made the case of more than usual interest to us, however, was the *marked erosion* and even *gross perforation* of both tables of the skull in the left parietal region, plainly visible roentgenologically, overlying the largest of the three chronic subdural hematomas. Operation was carried out in a two-stage procedure and the patient made a satisfactory recovery, returning to his work as a tailor. There was no history of head trauma in this case, but this was of no particular significance as the patient has a low IQ, nor could one entirely exclude a history of alcoholism, so it was quite possible that a previous head injury had been overlooked or disregarded. The case just cited is the only one in our experience in which there was actual roentgenologically demonstrated *erosion and perforation* of the skull over the subdural hematoma.

It is not unusual to find greatly thinned and elevated calvaria in the parietal region simulating congenital hydrocephalus, in young children with chronic subdural hematoma. Dr. Arthur Childe, of Winnipeg, Canada, in 1951,[21] described eight cases of chronic subdural hematoma with localized enlargement and thinning of the cranium over the subdural fluid collection, but none of his patients had an actual skull defect or perforation of the calvarium as did our adult patient just described. Our associate, Dr. C. E. Troland, recently operated on an infant with such a lesion who had a greatly thinned and locally expanded calvarium over the subdural clot.

Treatment of Chronic Subdural Hematoma.

This might be summarized by stating that once the diagnosis is seriously considered, bilateral superior temporal burr openings (often combined with frontal or parietal openings) are the procedures of choice with opening of the dura and evacuation of the underlying clot or clots. The dura usually has a peculiar greenish-brown tinge when first exposed overlying the clot. On opening the dura, dark liquid blood frequently pours out in great quantities, several ounces often being the amount recovered. The bony opening is then enlarged slightly and the subdural space is thoroughly irrigated with the head in various positions to remove all clot. We usually leave a catheter in the subdural space for forty-eight hours. Invariably, *bilateral* burr openings are made. If this simple procedure is not sufficient to eradicate the clot, it may be necessary to do a subtemporal decompression or even an osteoplastic flap in order to evacuate more completely the solid and liquid elements and the inner membrane covering the surface of the hemisphere.

In the series of 163 cases of subdural hematoma reviewed by Craig and Miller[2] at the Mayo Clinic, 202 operations were performed. They found that a second operation often was necessary, whether the initial procedures had been an osteoplastic flap or simple burr opening evacuation. A craniotomy should be performed in all cases (infant or adult) in which the membrane continues to fill after trephination and in cases in which the clot is largely solid and leathery (consistency of liver) and cannot be removed by suction through the small initial opening. We would like, however, to stress that in many cases the patient is quite ill and cannot tolerate a great deal of surgery. A rapidly performed subtemporal decompression is usually quite adequate for removal of the solid and liquid elements of the

clot and the inner membrane over the cerebral hemisphere. The clot does not have to be *entirely* removed.

The post-operative course may be stormy and the mortality rate is still rather high. In the series of Craig and Miller, the mortality was 14.7%. The patients may seem to respond satisfactorily for a day or two, then become comatose and die a few days later. Post-mortem findings in Craig and Miller's series were listed as follows: Cerebral edema, compression and distortion of the brain, cortical and subcortical hemorrhage, infarction of a cerebral hemisphere, degeneration of the brain, pontine hemorrhage, infarction of the pons, infarction of the cerebellum, degeneration of the pyramidal tracts, subarachnoid hemorrhage, meningitis, contusion and laceration of the brain.

The patient with a chronic subdural hematoma must be watched very closely, *post-operatively*. If consciousness is not well maintained and there is increased hemiparesis, aphasia, or stupor, re-operation and further clot removal is indicated immediately. The lesion is always a serious one, threatening life itself and constant watch must be maintained until the patient has reached a satisfactory, persistently good state of consciousness. It should be stressed also that if respiration is not satisfactory and a great deal of mucus is present, one should not hesitate to carry out *tracheotomy*. This may very definitely enhance the patient's chances for early recovery.

In *summary,* the interesting, always dangerous and important, post-traumatic neurosurgical lesion —chronic subdural hematoma—has been considered from both the diagnostic and therapeutic standpoints. In addition, certain interesting variations, such as the occurrence of the lesion in infants and children, and the fact that it may develop following *indirect* trauma to the head and may even produce erosion and *actual perforation of the skull,* roentgenologically, are discussed. It has also been emphasized that chronic or subacute subdural hematoma of surgical importance may result from *initial arterial* bleeding from an intracranial aneurysm, without head trauma, direct or indirect. Cases have been cited from our experience and that of others illustrating these interesting features of the lesion under consideration.

The methods of treatment are outlined and procedures for combating post-operative complications are described.

Bibliography

1. Ver Brugghen, A.: Neurosurgery in General Practice. Springfield, Ill., C. C. Thomas, 1952, p. 81.
2. Craig, W. McK., and Miller, R. H.: Subdural Hematomas. Minnesota Medicine, 37: 484-89, 1954.
3. Oldberg, E.: Subdural Hematoma. Med. Clin. N. A., 29: 62-72, 1945.
4. Engeset, Arne: On Roentgen Examination in Head Trauma (A Preliminary Report From the Past Five Years). Acta. Radiol., 34: 288-98, 1950.
5. Peet, M. M.: Injuries of Skull, Brain, and Spinal Cord. (2nd ed., S. Brock, editor) Baltimore, Md., The Williams and Wilkins Co., 1943, p. 129.
6. Coblentz, R. G.: Cerebellar Subdural Hematoma in Infant Two Weeks Old with Secondary Hydrocephalus: Operation with Recovery. Surgery, 8: 771-76, 1940.
7. Coleman, C. C., and Thomson, J. L.: Extradural Hemorrhage in Posterior Fossa. Surgery, 10: 985-90, 1941.
8. Campbell, E., Whitfield, R. D., and Greenwood, R.: Extradural Hematomas of the Posterior Fossa. Ann. Surg., 138: 509-20, 1953.
9. Kernohan, J. W.: (Cited by Craig and Miller[2]).
10. Gardner, W. J.: Traumatic Subdural Hematoma: with Particular Reference to the Latent Interval. Arch. Neurol. and Psychiat., 27: 847-55, 1932.
11. Munro, D., and Merritt, H. H.: Surgical Pathology of Subdural Hematoma Based on a Study of 105 Cases. Arch. Neurol. and Psychiat., 35: 64-78, 1936.
12. Cooney, J. F., and Baker, G. S.: Subdural Hematoma Following an Operation on the Spinal Cord: Report of Case. Proc. Staff. Meet. Mayo Clin., 28: 364-67, 1953.
13. Bucy, P. C.: Subdural Hematoma. Illinois M. J., 82: 300-309, 1942.
14. Putnam, T. J., and Cushing, H.: Chronic Subdural Hematoma, Its Pathology, Its Relation to Pachymeningitis Hemorrhagica and Its Surgical Treatment. Arch. Surg., 11: 329-93, 1925.
15. Bucy, P. C.: In Practice of Pediatrics (J. Brennemann, Editor). Hagerstown, Md., W. F. Prior Co., Inc., 1948, Vol. 4, Chapter 3, p. 23.
16. Ingraham, F. D., and Matson, D. D.: Subdural Hematoma in Infancy. J. Pediatrics, 24: 1-37, 1944.
17. Meredith, J. M.: Chronic or Subacute Subdural Hematoma Due to Indirect Head Trauma; Report of Two Cases. J. Neuro-Surg., 8: 44-47, 1951.
18. Davis, Loyal: The Principles of Neurological Surgery, 4th ed., Philadelphia, Lea and Febiger, 1953, p. 102.
19. Wechsler, I. S.: Textbook of Clinical Neurology, 6th ed. Philadelphia and London, W. B. Saunders Co., 1947, p. 536.
20. Grant, F. C.: Chronic Subdural Hematoma. J.A.M.A., 105: 845-49, 1935.
21. Meredith, J. M., and Gish, Geo., Jr.: Chronic Subdural Hematoma in an Adult Producing Marked Erosion and Perforation of the Overlying Dura and Skull. Report of Case with Operation and Recovery. J. Neuro-Surg., 9: 639-43, 1952.

A Quarter Century of Obstetrical Practice in Virginia

EUGENE S. GROSECLOSE, M.D.
Lynchburg, Virginia

PROGRESS in the field of obstetrics during the past twenty-five years has kept pace with that of the other specialized branches of medical and surgical practice. To present a full discussion of all the phases of present day obstetrical care would be impractical, so it will be the purpose of this presentation to briefly review the over-all progress made in the care and treatment of the expectant patient during this period. The changing concepts of the psychology and pathology of pregnancy and labor and the management of obstetrical complications will be reflected in the development of present day obstetrical teaching and practice during that period from the graduation of the author from medical school, through the obstetrical residency, and the subsequent years of private obstetrical practice. The results presented will in no way be original but will reflect the present day obstetrical literature and the statistical data compiled by the Department of Health of the State of Virginia and the National Office of Vital Statistics.

A truly remarkable decrease in the hazards of childbirth during this period as shown by both maternal and infant mortality rates may be attributed to many different factors. Of these factors, three of the most important are (1) the increased hospitalization of the pregnant and parturient patient; (2) the lifesaving qualities of the sulfa drugs and present day antibiotic therapy, and (3) the availability of whole blood for immediate transfusion. In addition to these, the more specialized care under trained personnel of a large percentage of obstetrical patients and the increased frequency of consultation in the management of medical and surgical complications of pregnancy have played an important role in obstetrical progress. According to Adair[1], probably the most important factors in the reduction of maternal and infant mortality have been the acquisition and dissemination of knowledge of obstetrics and gynecology due to the more adequate training and education of the obstetrical specialist today. The part played by such organizations as the American Board of Obstetrics and Gynecology, the American Academy of Obstetrics, the American Medical Association, and the American College of Surgeons whose combined efforts has greatly raised the standards of obstetrical practice and the requirements for specialization cannot be underestimated.

Complete and adequate maternal care is being develcped in practically every area of the United States, not only through the efforts of the medical profession, but also due to the education of the lay groups and the recognition of maternal care as a community problem. A better understanding of the relationship of environment and hygiene to obstetrical complications and the increased availability of adequate prenatal care has ushered in an era of prophylactic obstetrical practice during the current century.

Furthermore, a higher incidence of care by physicians as compared to the previous trend of midwife care in the home for patients in labor has played a major part in preventing obstetrical accidents and deaths. Also a better understanding of the physio-pathology of altered cardio-vascular and renal function, and the improved technique of obstetrical analgesia and anesthesia are all related to a much safer childbirth in the present generation. Finally, the art of conservatism in the management of many obstetrical complications which were previously treated by radical means has resulted in a lower mortality from many of these conditions.

For the purpose of this discussion a review will be presented of some of the major conditions directly affecting the maternal and fetal mortality rates, and this will then be followed by statistical and mortality tables to show the results of improved obstetrical care during the past quarter century.

Obstetrical Complications During Pregnancy

Only the major complications of pregnancy, labor, and the puerperium will be presented with a brief review of the present method of treatment as compared to that of two decades ago.

I. Hemorrhage in Pregnancy:

One of the major complications of pregnancy *is hemorrhage,* and this condition still remains one of the leading causes of obstetrical deaths. The most

The assistance and co-operation of Dr. L. L. Shamburger, Director, and his co-workers of the Bureau of Maternal and Child Health in preparing the graphs is gratefully acknowledged.

Received for publication July 29, 1955.

frequent causes of obstetrical hemorrhage are (1) abortion; (2) ectopic pregnancy; (3) placenta previa, and (4) premature separation of the placenta, or abruptio-placenta. Other causes of importance are atony of the uterus, laceration of the birth canal, and retained placental or membranous tissue.

(a) *Threatened Abortion:* The prevention and treatment of early abortion is still one of the major unsolved problems of prenatal care. The treatment of this condition remains one of the most uncertain and unsatisfactory forms of therapy for the bleeding complications of pregnancy. Many authors have estimated that approximately one out of every ten conceptions will result in a spontaneous abortion, regardless of the type of treatment employed. The treatment of this condition twenty-five years ago consisted mainly of prolonged bed rest and sedation, and from that period to the present time the treatment of threatened abortion has varied from the administration of vitamin E, thyroid extract, corpus luteum hormone, estrogenic hormone, or a combination of estrogenic and corpus luteum therapy. But even today it is difficult to estimate the value of any, or all of these procedures, so it may be said that any form of specific therapy is not known. Therefore, the improvement in fetal salvage in threatened abortion has shown very little demonstrable improvement with present day therapy. However, it is the opinion of the author that all cases of bleeding complicating, the early weeks of pregnancy should be treated by bed rest, sedation, and either corpus luteum or estrogenic hormone in moderate doses until the bleeding has ceased or the abortion is completed—either spontaneously or by necessary surgical means as a result of severe hemorrhage.

(b) *Ectopic Pregnancy:* The management of ectopic pregnancy has shown very little change during the past two decades except in two factors: (1) better methods of diagnosis, and (2) better facilities for immediate blood transfusion in those patients with intra-peritoneal hemorrhage. The accepted treatment for this condition, except for late abdominal pregnancy, has in the past, and still consists of immediate surgery *once the diagnosis is established.* Teaching of medical students and interns, as well as the obstetrical residents and the general practitioners, to be ever on the alert for ectopic or tubal pregnancy, will mean earlier diagnosis and surgical intervention before hemorrhage or shock occur. The present day technique for culdescopic diagnosis in many cases and the provisions for the rapid replacement of blood loss made possible by the Hospital Blood Bank, has prevented the loss of time prior to surgery which was previously used to treat shock, and has therefore reduced the present day mortality from this complication. Added to these factors has been the early ambulation following surgery with a shortened hospital stay and reduced

FIGURE I

Births in United States: 1935-1950

Year	Total Births	Percent of Total by Physicians	Percent of Total by Midwives and Others	Percent of Total in Hospitals
1935	2,155,105	87.5%	12.5%	36.9%
1936	2,144,790	88.3%	11.7%	40.9%
1937	2,203,337	89.4%	10.6%	44.8%
1938	2,286,962	89.9%	10.1%	48.0%
1939	2,265,588	90.2%	9.8%	51.1%
1940	2,360,399	90.7%	9.3%	55.8%
1941	2,513,427	91.4%	8.6%	61.2%
1942	2,808,996	92.6%	7.4%	67.9%
1943	2,934,860	93.1%	6.9%	72.1%
1944	2,794,800	93.3%	6.7%	75.6%
1945	2,735,456	93.5%	6.5%	78.8%
1946	3,288,672	94.6%	5.4%	82.4%
1947	3,699,940	94.9%	5.1%	84.8%
1948	3,535,068	94.7%	5.3%	85.6%
1949	3,559,529	94.9%	5.1%	86.7%
1950*	3,554,149	95.1%	4.9%	88.0%

*Latest year available.

As shown in Fig. I, the total births in the United States in 1935 was 2,155,105. Of these births 87.5% were conducted by physicians and 12.5% by midwives and others. The total hospital deliveries was 36.9%. By 1950 the percentage of hospital deliveries had risen to 88.8%, and of the total deliveries of approximately three and one-half million, 95.1% were conducted by physicians while midwives performed only 4.9% of the total.

mortality and morbidity, especially those of circulatory origin.

(c) *Placenta Previa:* The treatment of this complication of the third trimester of pregnancy has undergone a very definite change during the past two decades. A review of notes taken as a medical student on the management of placenta previa[2] revealed the following teaching: "When the diagnosis of placenta previa is made, *empty the uterus immediately.* Should the placenta be of marginal or partial type, induce labor by amniotomy and then insert a Voorhees bag, following which delivery may be completed by version or by forceps delivery. When a central placenta previa exists Cesarean section should be done if the baby is alive. If the fetus is dead and the cervical dilation will permit, a Braxton-Hicks version should be done."

Today the use of manual dilatation of the cervix or the insertion of a Voorhees bag are considered to have no place in the management of this complication and should be completely discarded. Likewise, the indication for version and extractions have definitely been reduced in present day obstetrical practice, due to the great danger of fetal death and of trauma and/or infection in the mother. The present day trend of treatment for placenta previa may be considered briefly as (1) conservative treatment in the termination of pregnancy, and (2) prompt treatment of shock and the immediate replacement of blood loss. Most authors now agree that the following general principle should be adhered to, as stated by the author[3] in a previous paper: (1) Accurate diagnosis of the cause of bleeding is essential. No patient expected of having a placenta previa should be examined until preparation for both vaginal and abdominal delivery have been made. (2) Treatment of shock and replacement of blood loss by transfusion of whole blood are essential before instituting any procedure for delivery, and preparation for transfusions should be completed before manual examination is made. (3) The method of delivery should be almost wholly dependent upon the status of the cervix. (4) In all cases in which there is no cervical dilatation, and in all cases of true placenta previa centralis, regardless of the cervical dilatation, and in those cases of mal-presentation of the fetus, Cesarean section is the safest and therefore the most conservative form of treatment.

(d) *Premature Separation of the Placenta:* Likewise, in the present day management of premature separation of the placenta, manual cervical dilatation and other traumatic procedures for delivery have no place in the elective treatment of abruptio. Prophylaxis of this complication by regular prenatal care

FIGURE II

Births Resident*—Virginia

Year	Total Resident Births*	Attended by Physicians	Percentage of Total by Physicians	By Midwives and Others	Percentage by Midwives and Others	Hospital Births	Percentage in Hospitals
1935	51,487	36,256	70.4%	15,231	29.6%	7,929	15.4%
1936	51,247	36,912	72.0%	14,335	28.0%	9.119	17.8%
1937	51,950	37,833	72.8%	14.117	27.2%	10,415	20.0%
1938	53,495	39,578	74.0%	13,917	26.0%	11,864	22.2%
1939	52,921	39,370	74.4%	13,551	25.6%	13,196	24.9%
1940	56,658	43,372	76.6%	13,286	23.4%	17,730	31.3%
1941	60,789	47,621	78.3%	13,168	21.7%	22,686	37.3%
1942	67,695	54,879	81.1%	12,816	18.9%	30,379	44.9%
1943	70,844	58,641	82.8%	12,203	17.2%	35,542	50.2%
1944	68,365	57,519	84.1%	10,846	15.9%	38,021	55.6%
1945	66,362	56,085	84.5%	10,277	15.5%	40,194	60.6%
1946	74,980	64,849	86.5%	10.131	13.5%	48,765	65.0%
1947	84,732	73,876	87.2%	10,856	12.8%	57,298	67.6%
1948	81,566	70,504	86.4%	11,062	13.6%	56,088	68.8%
1949	82,761	71,774	86.7%	10,987	13.3%	58,811	71.1%
1950	81,986	71,358	87.0%	10,628	13.0%	60,112	73.3%
1951	86,771	76,730	88.4%	10,041	11.6%	67,026	77.2%
1952	90,017	80,517	89.4%	9,500	10.6%	73,079	81.2%

*Figures for births are from the National Office of Vital Statistics and are according to *Place of Occurrence prior to 1940; beginning with 1940,* they are from the Virginia Bureau of Vital Statistics and are according to *Place of Residence of Mother.*

During this same year in the state of Virginia only 70% of the births were attended by physicians, and only 15.4% of the births occurred in hospitals, as shown in Fig. II. During 1952 the percentage of physician deliveries had risen to 89.4% and hospital deliveries had increased to 81.2% paralleling a rise in the National Statistics.

and the reduction in the incidence of toxemia of pregnancy will naturally reduce the incidence of this complication. However, once this condition exists, treatment for shock and the replacement of blood loss should be completed before instituting measures for delivery, as this will greatly decrease the operative risks in those patients delivered by Cesarean section. Should vaginal delivery be feasible in those case in labor with the cervix dilated, then prompt replacement of blood loss following delivery decreases not only the immediate danger, but lessens the incidence of puerperal infection and morbidity. especially since serious complications were so few. In this group of placenta previa conservative treatment was employed in 32% of these cases and the incidence of Cesarean section was only 21.8%. A rigid adherence to the expectant treatment method with delay may be questioned in some cases, and these dangers were emphasized by the author.

II. *Toxemia of Pregnancy:*

No other complication in the practice of obstetrics has attracted more attention of the obstetrician, the chemist, the physiologist, and the pathologist than

FIGURE III

Maternal and Infant Death Rates in the United States Registration Area, by Color, for the Years: 1935-1950

United States

Year	Maternal Mortality (Rates Per 1,000 Live Births)			Infant Mortality (Rates Per 1,000 Live Births)		
	White	Nonwhite	Total	White	Nonwhite	Total
1935	5.3	9.5	5.8	51.9	83.2	55.7
1936	5.1	9.7	5.7	52.9	87.6	57.1
1937	4.4	8.6	4.9	50.3	83.2	54.4
1938	3.8	8.5	4.4	47.1	79.1	51.0
1939	3.5	7.6	4.0	44.3	74.2	48.0
1940	3.2	7.7	3.8	43.2	73.8	47.0
1941	2.7	6.8	3.2	41.2	74.8	45.3
1942	2.2	5.4	2.6	37.3	64.6	40.4
1943	2.1	5.1	2.5	37.5	62.5	40.4
1944	1.9	5.1	2.3	36.9	60.3	39.8
1945	1.7	4.5	2.1	35.6	57.0	38.3
1946	1.3	3.6	1.6	31.8	49.5	33.8
1947	1.1	3.3	1.3	30.1	48.5	32.2
1948	0.9	3.0	1.2	29.9	46.5	32.0
1949	0.7	2.4	0.9	28.9	47.3	31.3
1950	0.6	2.2	0.8	26.8	44.5	29.2

The maternal and infant mortality rate in the United Sates from 1935-1950, as indicated in Fig. III, showed a remarkable reduction from 5.8 maternal deaths per 1000 live births to 0.8. The infant mortality rate reduced from 55.7 per 1000 live births to 29.2.

A more conservative attitude of watchful waiting in patients of premature separation of a mild or moderate degree is now accepted, provided the patient is hospitalized or has immediate access to hospital treatment. In an excellent discussion of the diagnosis and management of late pregnancy hemorrhage, Fish[4] and his associates reported on the conservative treatment of 303 cases of external hemorrhage in 5,806 deliveries. In the abruptio group, conservative treatment only was employed and no Cesarean sections were done. No case of postpartum hemorrhage was encountered, and there were no maternal deaths. Adequate supportive therapy, induction of labor and vaginal delivery, avoiding the imposition of a major surgical procedure upon a critically ill patient would appear to be the most satisfactory plan of treatment, has the toxemia of pregnancy. In spite of a masssive volume of research into the cause of this complication, the etiology remains unknown today, and toxemia is still the leading cause of maternal deaths in the United States. Great progress has been made in the prevention of toxemia as a result of more universal and regular prenatal care for most pregnant women. The early detection of toxemia of pregnancy and the institution of proper treatment to prevent the late and serious toxemias, especially the hypertensive-vascular and the convulsive groups, can only be accomplished by regular prenatal care for all pregnant patients. With proper diet, weight control, treatment of anemia, and restriction of the sodium intake, many toxemias may be prevented.

However, in spite of the vast storehouse of present

FIGURE IV

Resident Maternal Deaths With Rates Per 1,000 Live Births in the State of Virginia: 1935-1952

Year	Number			Rate		
	White	Colored	Total	White	Colored	Total
1935	170	119	289	4.6	7.9	5.6
1936	163	137	300	4.4	9.3	5.8
1937	145	148	293	3.9	9.7	5.6
1938	154	136	290	3.9	9.0	5.3
1939	148	124	272	3.8	8.2	5.0
1940	138	115	253	3.4	7.3	4.5
1941	121	108	229	2.7	6.7	3.8
1942	118	104	222	2.3	6.1	3.3
1943	113	97	210	2.1	5.6	3.0
1944	88	101	189	1.7	5.9	2.8
1945	83	63	146	1.7	3.7	2.2
1946	73	51	124	1.3	2.9	1.7
1947	69	79	148	1.1	3.9	1.7
1948	45	69	114	0.7	3.3	1.4
1949	34	50	84	0.6	2.3	1.0
1950	41	43	84	0.7	2.0	1.0
1951	51	44	95	0.8	2.0	1.1
1952	29	44	73	0.4	1.9	0.8

FIGURE V

Deaths of Infants Under one Year With Rates Per 1,000 Live Births in the State of Virginia: 1935-1952

Year	Number			Rate		
	White	Colored	Total	White	Colored	Total
1935	2,144	1,421	3,565	58.8	95.4	69.4
1936	2,284	1,494	3,778	62.7	101.5	73.9
1937	2,175	1,441	3,616	59.3	95.4	69.8
1938	2,175	1,352	3,527	56.7	89.9	66.1
1939	1,962	1,268	3,230	50.4	83.9	59.7
1940	2,043	1,252	3,295	49.8	80.0	58.2
1941	2,410	1,530	3,940	54.0	94.9	64.8
1942	2,248	1,320	3,568	44.4	77.4	52.7
1943	2,183	1,208	3,391	40.9	69.3	47.9
1944	2,155	1,102	3,257	42.1	64.3	47.6
1945	2,033	1,155	3,188	41.1	68.6	48.0
1946	2,013	957	2,970	35.0	54.6	39.6
1947	2,091	1,045	3,136	32.4	51.9	37.0
1948	2,070	1,083	3,153	34.2	51.6	38.7
1949	2,006	1,156	3,162	32.8	53.5	38.2
1950	1,728	1,118	2,846	28.5	52.3	34.7
1951	1,823	1,161	2,984	28.3	51.7	34.4
1952	1,876	1,268	3,144	27.9	55.5	34.9

Note: Prior to 1939 deaths of infants are according to Place of Occurrence; beginning with 1939, they are by Place of Residence.

The reduction in maternal and infant mortality in the state of Virginia showed an identical reduction, as presented in Fig. IV and Fig. V.

day knowedge of the physio-pathology of the toxemias, the possible role of altered placental physiology, the relationship of endocrine imbalance, the altered renal function with electrolyte imbalance, toxemia still remains a frequent cause of maternal death, especially in the Southern States. The present day medical therapy of pre-eclampsia and eclampsia has not changed materially during the past two decades, and still consists of three phases (1) prevention; (2) treatment of the symptoms and control of convulsions, and (3) the termination of the pregnancy, since it is generally agreed that the longer the patient shows symptoms of pre-eclampsia, the greater is the incidence of permanent hypertension. Therefore, the treatment of the pre-eclampsia may be considered as more radical provided the patient is thirty-two weeks or more pregnant. Present day medical therapy consists of heavy sedation by the barbiturates, the administration of concentrated magnesium sulphate and hypertonic glucose, followed by the termination of the pregnancy by the indicated method of delivery. After the onset of true eclampsia with convulsions, intravenous barbiturates, demerol, and morphine are used. In recent years the use of an intravenous drip of sodium pentathol or the administration of continuous spinal anesthesia to control convulsions have been advocated.

The method for the third phase of the treatment, namely the interruption of the pregnancy, depends upon several important factors. Previously, during the days of my internship and residency, a radical attitude of immediately emptying the uterus was advocated and the use of an intra-uterine bag was commonly employed. The maternal mortality and the incidence of co-existing infection were both very high, the death rate reaching as high as 50% in some reported series of eclampsia. Today, labor is induced by artificial rupture of the membranes, provided the fetal head is engaged and the cervix favorable. This may be followed by the administration of minute doses of pitocin intramuscularly or by the intravenous pitocin drip, using 5 minims of pitocin in 1000 c.c. of 5% glucose in distilled water—with a very careful control of the rate of administration. *Constant attendance of the patient and facilities for immediate anesthesia* are essential to the safety of this method of induction. Should the cervix remain undilated or uneffaced, or if the onset of labor does not follow the use of pitocin, or if amniotomy appears to be dangerous for many cause, then delivery by Cesarean section is indicated; the anesthesia of choice depending upon the severity of the hypertension and the patient's general condition. Abdominal delivery should also be considered in those cases of rapidly fulminating toxemia, or the appearance of renal failure.

III. *Medical Complications of Pregnancy:*

A full discussion of the past and present methods of treatment of all the medical complications of pregnancy is impractical in the scope of this presentation. The more common medical complications that arise during pregnancy, and upon which obstetrical management will largely depend, will be briefly reviewed. The safety of child bearing during the past generation as compared to several decades ago is increased largely as a result of closer co-operation between the obstetrician and the internist. Frequent consultation in the management of medical complications, as well as present methods of medical therapy of the acute infectious diseases and other conditions, such as heart diseases, diabetes, nephritis, pulmonary tuberculosis and other, have resulted in the continuation of pregnancy in these complications to a safe and successful termination. At present, many conditions previously considered as true indications for the therapeutic termination of pregnancy no longer present the same hazard to the expectant patient. Likewise, frequent consultations with specialists in the other fields of medicine, especially the surgeon, the urologist, and the radiologist, as practiced today, has greatly reduced the hazards of a surgical emergency and of the operations necessitated by these complications during gestation.

(a) *Pregnancy and Heart Disease:* The physiologic burden imposed upon the heart during pregnancy has been well documented by many workers. The increased cardiac load begins soon after the beginning of pregnancy and progresses steadily until the eighth month. During the last four to six weeks of pregnancy the blood volume, cardiac output, and rate of flow tend to decrease with a resulting diminution of the work of the heart. In a previously damaged heart this extra load may result in circulatory embarrassment. Therefore, in all such cases an estimate of the cardiac capacity and function by a trained cardiologist prior to the advanced months of pregnancy and labor should be carried out. During the course of the pregnancy the internist should always be appraised by the obstetrician of any evidence of cardiac failure. With the reduction in maternal mortality from hemorrhage, infection, and toxemia in recent years, cardiac failure has become one of the leading causes of death in a number of American obstetric hospitals.

During my student days it was taught that "in

general, the prognosis of pregnancy complicated by heart disease is good as long as cardiac compensation is maintained, and in the cardiac primipara delivery should be done by Cesarean section." Today it is known that Cesarean section should never be done on a patient with cardiac disease except for a complicating and specific obstetrical indication. Hamilton and Thompson[5] have shown that cardiac failure occurs approximately seven times more often than in vaginal deliveries and that pulmonary embolism occurs twice as often in these patients. Furthermore, they state that the death rate following abdominal deliveries in the cardiac patient was approximately four times greater than that following vaginal deliveries.

In a recent review of Rheumatic Heart Disease in Pregnancy by Gorenberg and Chesley[6], covering approximately 500 cases since 1933, they outlined a system of management of heart disease in pregnancy, presented mortality tables for the various stages or degrees of cardiac disability and outlined the immediate and remote prognosis, They concluded that (1) competent medical management reduces the impairment of the cardiac function in pregnancy to a point where decompensation and death are rare; (2) therapeutic abortion is unnecessary, and (3) Cesarean section is not indicated. They further concluded that the heart is not damaged by child bearing, nor is the rheumatic process accelerated, and that, with meticulous care and early and adequate treatment when indicated, the burden of pregnancy can be borne even by women with severe grades of cardiac damage.

(b) *Pregnancy and Diabetes:* For many years pregnancy in the diabetic patient was looked upon as a major complication, and in the past was considered as a justifiable indication for therapeutic abortion in severe cases. Today it has been definitely shown that the duration and severity of the diabetic process are directly associated with the outcome of the pregnant diabetic. Early diagnosis of this disease is of utmost importance, and, once the diagnosis is made, careful management by insulin and dietary control under the supervision of a competent internist, and with close co-operation between the patient, the internist, and the obstetrician, pregnancy can now be attempted with less fear of complications, even though it is admitted that this disease certainly imposes additional risks on both the mother and her child. More universal prenatal care has resulted in the early diagnosis of diabetes in pregnancy, and thus its control in early pregnancy. A proper classification of the severity of the diabetes, as well as the presence or absence of renal and vascular damage is of utmost importance in the management of this disease in pregnancy. Furthermore, a careful analysis by the obstetrician of the previous pregnancies and deliveries in multiparous patients should always be made.

In a recent review of this disease by Nelson, Gillespie, and White[7], patients were classified for prognosis on the basis of age of the patient at the onset of the disease, the duration of the diabetes, and the extent of any vascular-renal complication. In their opinion all patients, with the exception of the less severe group, should be hospitalized at the thirty-fourth week of pregnancy and delivered by the thirty-seventh week, depending upon the condition of the cervix. Furthermore, delivery by the vaginal route is preferred when the cervix is adequate and the fetal size not excessive.

In recent years there has been much debate on the merits of female sex hormone therapy in the management of diabetes in pregnancy. It is agreed that an imbalance in the sex steroids with a low value of urinary estrogen and pregnandiol exists. However, no general agreement exists among obstetricians on the value of replacement therapy by the administration of Stilbestrol and progesterone, but, in many reported series of cases, hormone therapy has apparently reduced the incidence of abortion and premature labors, as well as the toxemias of pregnancy.

The method of delivery in a diabetic will depend largely on the period of gestation in which delivery becomes neecssary, the condition of the cervix when induction of labor is indicated, and the size of the fetus in utero. Roentgenographic determination of fetal size is a very important procedure, since excessive size of the fetus is a common occurrence in diabetes. Since it is an accepted fact that infants of diabetic mothers do not survive traumatic pelvic delivery, and since many of these patients are either primigravida, or have had previous abdominal deliveries, then the incidence of Cesarean sections has been necessarily high and reported between 30 and 50% in different series. To increase the infant survival rate, immediate steps should be taken after birth to prevent as far as possible the development of hyaline membrane disease so commonly seen in those infants delivered prematurely, and placed under oxygen therapy.

(c) *Pregnancy and Tuberculosis:* As shown by Schaeffer and his co-workers[8] at the New York Lying-In Hospital, the incidence of pulmonary tuberculosis complicating pregnancy has shown a sharp rise in

the past thirty years, due largely to the routine use of chest roentgenograms on the pregnant patient. Bridgeman and Norwood[9] found an incidence of approximately 1% in 14,000 obstetrical patients at the Johns Hopkins Hospital over twenty-five years ago.

The importance of early diagnosis of this disease cannot be stressed too strongly, since the prognosis is dependent largely upon the type and extent of the disease when the diagnosis is made and treatment is instituted. It is now generally agreed that the tuberculous patient who becomes pregnant, or the pregnant patient who contracts pulmonary tuberculosis should be admitted to a tuberculosis sanatorium for complete observation and treatment, and then be delivered in a properly equipped obstetrical hospital at term. Sanatorium treatment on these patients may include such surgical procedures as lobectomy, or even pneumonectomy when necessary, due in large part to controlled anesthesia, as well as the modern method of therapy by Streptomycin and other antibiotics. The obstetrical management of the tuberculous patient should aim at the relief of pain in labor by proper analgesics and the shortening of labor when possible by forceps delivery through the vaginal route. The use of infiltration anesthesia, or pudendal block, or some form of conduction anesthesia is advocated, although inhalation anesthesia may be used with a great degree of safety, especially cyclopropane gas.

Casarean sections are done for obstetrical indications only, except for cases of border-line pelvic contraction with failure of progress early in labor in order to avoid a long and exhausting labor. Finally, a return to the sanatorium following delivery with a continuation of tuberculous therapy and further observation are of paramount importance.

As pointed out by Thornton[10], pregnant patients with pulmonary tuberculosis twelve years ago were not admitted to the tuberculosis sanatorium in the State of Virginia, but were referred immediately to the hospital for therapeutic interruption of the pregnancy. Likewise, those patients in the sanatorium who were found to be pregnant were admitted to the University of Virginia Hospital for therapeutic abortion regardless of the stage of pregnancy, or the extent of the pulmonary disease.

It is now generally agreed by an increasing number of obstetricians that with early diagnosis of pulmonary tuberculosis in the pregnant patient, and the immediate institution of sanatorium treatment with a conservative type of delivery by a competent obstetrician, with the proper follow-up therapy, that pregnancy does not exert a harmful effect on the tuberculous process; nor is pregnancy a contraindication to the modern methods of active tuberculous treatment even those requiring surgical procedure. Therefore, pulmonary tuberculosis is very seldom a recognized indication for therapeutic interruption of pregnancy.

During the past two decades the control of many of the acute infectious diseases, as well as the specific treatment of these diseases, such as the treatment of syphilis by modern anti-luetic treatment and the virtual elimination of congenital syphilis have all contributed to the remarkable lowering of maternal and fetal mortality rates. Likewise, the management of surgical emergencies in pregnancy, such as acute appendicitis and peritonitis and an improved control of all types of genito-urinary infections, have all played an important role in making pregnancy now much safer than was possible at the beginning of my obstetrical career. The advent of the discovery of the Rh factor and the subsequent studies by Weiner, Levine, Potter, Diamond, and many others, as pointed out in a previous report[3], has resulted in a better understanding of the hemolytic diseases of the newborn and of the modern treatment by immediate replacement blood transfusions in the affected babies with a lowering of the infant mortality rate.

The Conduct of Labor

Time will not permit a consideration of all the factors in the present day management or conduct of labor as recommended by most well-trained obstetricans. However, the trend to conservatism during the past 20-25 years has been an outstanding contribution of this specialty. Improved methods of obstetrical analgesia and anesthesia, especially with the assistance of well trained anesthetists, have contributed to a safer conduct of labor and delivery. The availability of whole blood from the hospital blood bank for immediate use in the obstetrical patient has greatly reduced the maternal mortality from hemorrhage, which for so many years resulted in the loss of many lives due to a necessary delay in obtaining blood for transfusions. The use of antibiotic therapy in cases of prolonged labor, and in the neglected obstetrical cases which are first seen late in labor has played an important role in reducing intra-partum infection, as well as permitting certain obstetrical procedures which would further reduce the exhaustion of the patient and reduce the instance of more severe types of infection. In my opinion, the more liberal interpretation of the indications for Cesarean sections in modern obstetrical practice

which reduces in many cases a necessity of extremely difficult forceps delivery or version in a patient already weakened by long labor has played an important role in the over-all reduction of fetal and maternal mortality. Finally, constant supervision of the patient in labor by trained personnel in well equipped maternity departments, with closer attention to the fluid balance and proper rest of the patient are factors that contribute largely to the increased resistance of the patient and her ability to withstand labor and delivery.

Conduct of the Puerperium

Two of the most important factors in reducing maternal mortality during the puerperium have been the use of antibiotic therapy and the early ambulation of the puerperal patient, which is now universally practiced. It is generally agreed that post-operative and post-partum complications of the vascular system, especially thrombo-phlebitis and embolism have been reduced by early ambulation of the obstetrical patient. In addition, it is felt that early ambulation has resulted in the reduction of abdominal distention, urinary retention, and other disturbing symptoms during this period. The prevention of severe and often fatal puerperal septicemia, peritonitis, acute mastitis and urinary infections has largely resulted from modern antibiotic therapy available to the puerperal patient at the present time.

Results of Modern Obstetrical Management

The results obtained during the past two decades by modern obstetrical management and improved technique in the conduct of labor and delivery will be reviewed graphically on the following charts:

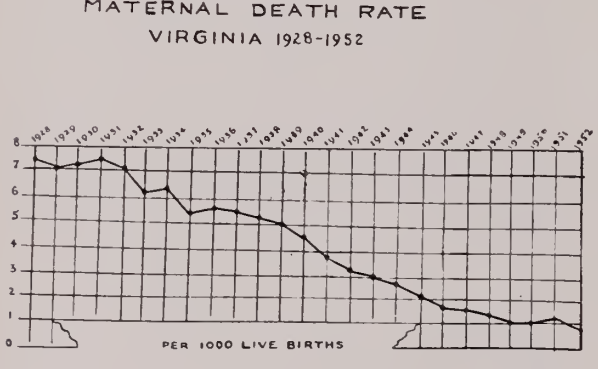


Figure VI

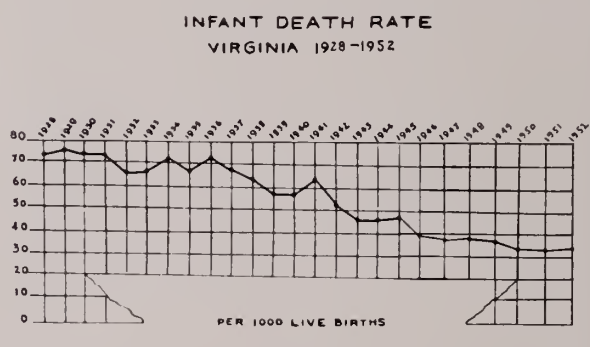


Figure VII

The over-all reduction in maternal and infant death rates in Virginia from 1928 to 1952, a period of 24 years, are shown very graphically in Fig. VI and Fig. VII. The maternal death rate in Virginia dropped from a rate of 7.5 per 1000 live births in 1928 to a rate of .8 in 1952. During this same period the infant death rate in Virginia dropped from 72 per 1000 live births in 1928 to 32 in 1952.

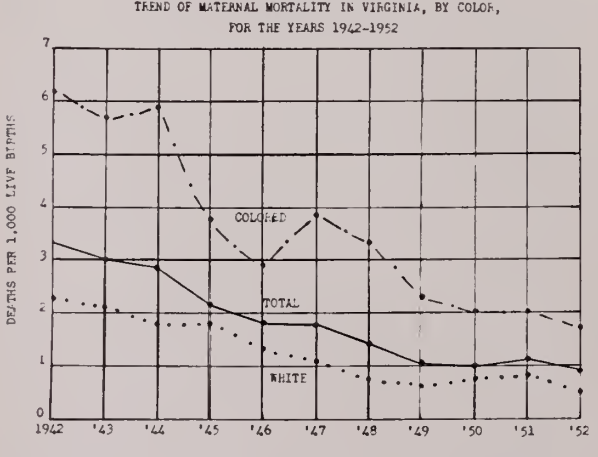


Figure VIII

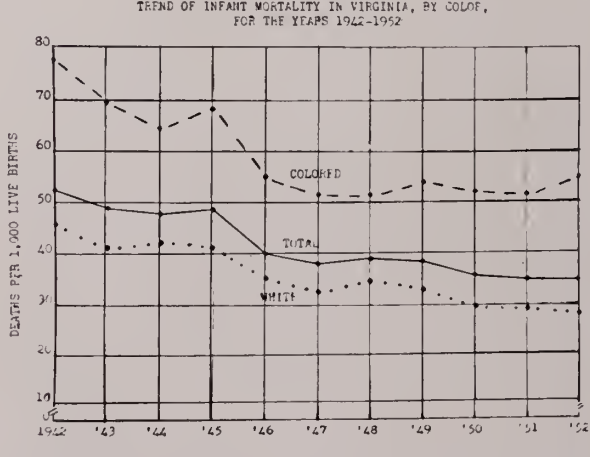


Figure IX

A comparison of the death rates of both mothers and infants in the white and colored races are presented in Fig. VIII and Fig. IX. The colored death rates are approximately twice that in the white race, due largely to poorer economic conditions and less frequent and adequate prenatal care in these patients. However, a comparable reduction of death rates in the Negro race has been accomplished by modern obstetrical care.

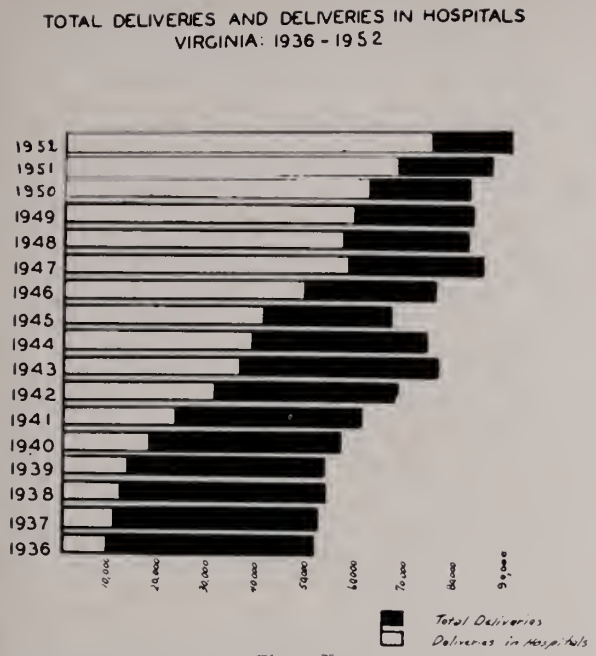


Figure X

Figure X reveals that in 1936 only 10,000 deliveries of a total of 52,000 births occurred in hospitals in the state of Virginia, whereas in 1952 approximately 72,000 deliveries of a total of 90,000 births occurred in hospitals.

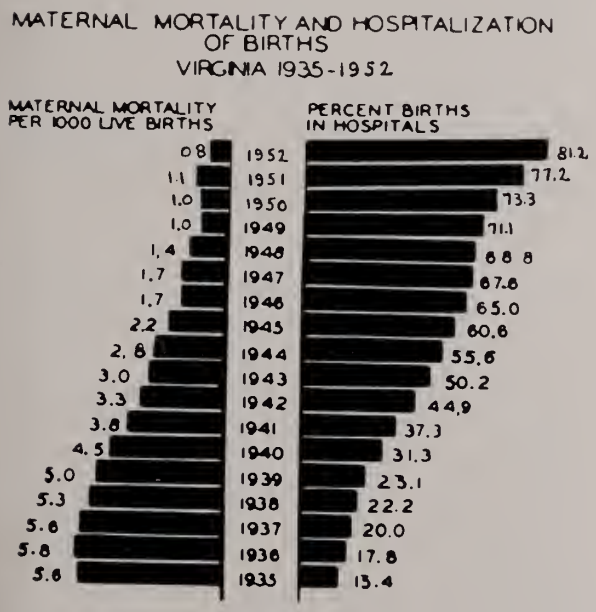


Figure XII

Due to the steady increase in hospitalization of pregnant patients, and the delivery in hospitals by trained physician personnel, the maternal death rate in Virginia has shown a remarkable decrease to the present low rate of 0.8 per 1000 live births.

Finally, the over-all results of improved obstetrical management and prenatal care in Virginia during the past quarter of a century are clearly shown in the last three charts.

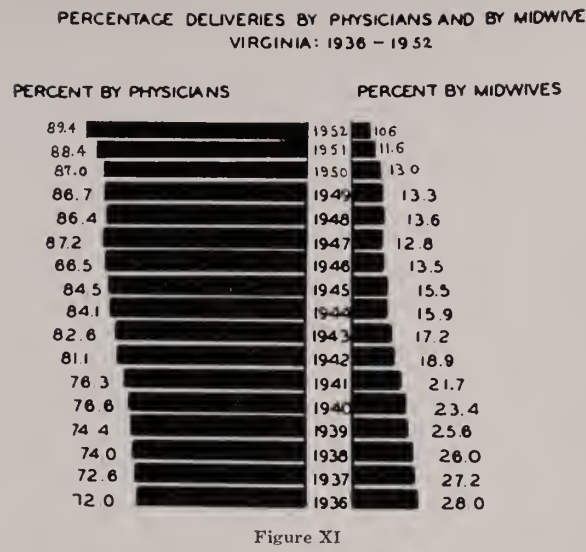


Figure XI

During this same period of time an increase in the deliveries by physicians paralleled the rise in hospital deliveries, as shown in Fig. XI. During these years the reduction of deliveries by midwives has gradually been reduced to approximately 10%.

With the application of the above principles of treatment and management of the expectant patient, childbirth in the years ahead may be made even more safe for the infant and mother. With increased educational facilities in the medical schools for training personnel in the obstetrical art, a wider scope of clinic and prenatal care, and with the continued fine co-operation of the Department of Health as in the years past, Virginia will keep pace with all future developments to bring the best possible care to more obstetrical patients.

BIBLIOGRAPHY

1. Adair, Fred L.: Am. J. Obst. & Gynec., 68: No. 1, Page 20. Mortality Associated with Maternity.
2. Groseclose, Eugene S.: Virginia M. Monthly, 72: No. 3, Page 113. Recent Advances in Obstetrical Care.
3. Mauzy, C. H.: Personal Communication.
4. Fish, John S.; Bartholomew, R. A.; Calvin, E. D.; Grimes, W. H., Jr., and Lester, W. M.: South. M. J., 47: No. 10, Page 954, Oct. 1954. Diagnosis and management of Late Pregnancy Hemorrhage.
5. Hamilton, B. E., and Thompson, K. J.: Williams & Wilkins Company, Baltimore, 1942. The Heart in Pregnancy and the Childbearing Age.
6. Gorenberg, Harold, and Chesley, Leon C.: Obstetrics and Gynecology, 1: No. 1, Jan. 1953.
7. Nelson, H. Bristol; Gillespie, Luck, and White, Priscilla: Obstetrics and Gynecology, 1: No. 2, Feb., 1953.
8. Schaeffer, George; Douglas, R. Gordon, and Driesh-

poon, Irving H.: Obstetrics and Gynecology, 1: No. 3, March, 1953. The Obstetric Management of the Tuberculous Patient.

9. Bridgeman, E. W., and Norwood, V.: Bull. Johns Hopkins Hosp., 38: 83, 1926. Pulmonary Tuberculosis in Pregnancy.

10. Thornton, W. N., Jr.: Obstetrics and Gynecology, 2: No. 5, Nov., 1953. Theraputic Abortion.

511 Allied Arts Building.

Blood Transfusion Plan.

A new blood transfusion plan which would make more blood available in case of war or disaster has been proposed by two Army scientists. The new plan, outlined in the October 1 Journal of the American Medical Association, is a modification of the universal blood donor system used during World War II and the Korean war.

In the universal donor system, only one type of blood—group O—is used for transfusions, because it generally does not contain factors dangerous to persons of other blood types. The few O donors with dangerous factors can be screened out. Types A, B, and AB blood can cause trouble when given to persons of different types.

However, the Army scientist said use of a single typing test would allow the use of all A blood as well as all of O. This would eliminate the one serious limitation of the "O-only" system, which is wasteful because it uses only about 30 per cent of the "available donor panel"—the American population. Using all O and all A blood would allow use of 85 per cent of the donor panel. The "O-only" method is satisfactory in a relatively small combat zone, such as Korea, which can be supported by the population and transportation facilities of the United States. In fact, during the Korean war, blood was provided in "unstinting amount," but the transfusion service may never again "have it so good." "Were we to become involved in a larger war, or a war in several theaters, or a war involving the United States mainland we could not afford to rely upon a transfusion service as prodigal as the present universal donor system."

"Perhaps the most critical factor in the new system is the ability of the personnel who must administer the blood." During the Korean war, the universal donor system required little or no knowledge of blood transfusion where one sort of blood was used for all persons.

The proposed plan requires no high level of skill, but it does require a high level of conscientiousness and a higher level of training, for the personnel must know how to perform the test and how to interpret it. While the plan still has some limitations, they do not seem "impossible to overcome," and civilian and military investigators are working on the problems. Field trials of serums for use in critical typing tests already are under way.

Making the report were Lt. Col. Joseph H. Akeroyd of the Medical Service Corps and Lt. Col. William H. Crosby of the Medical Corps.

The Surgery of Patent Ductus Arteriosus

LEWIS H. BOSHER, JR., M.D.
JOSEPH BAILEY, A.B., B.S.
Richmond, Virginia

THE possibility of obliterating the patent ductus was first suggested by Munro[2] in 1907. This surgical feat was attempted by Strieder[4] in 1937, but first successfully accomplished by Gross[1] in 1938.

On March 28, 1940, at the Medical College of Virginia Hospital, a patent ductus arteriosus was successfully ligated by Dr. I. A. Bigger in a fourteen year old male. The patient was underdeveloped and had experienced breathlessness on slight exertion. Prior to operation a continuous machinery murmur was heard over the precordium, loudest over the second and third left interspaces. A thrill was easily palpable in this region. The pulmonic second sound was somewhat accentuated. The blood pressure was 110/50, and the pulse pressure noticeably widened. By roentgenologic examination the heart was enlarged with a cardiothoracic ratio of 55 per cent. The enlargement was confined to the left ventricle and left atrium. The pulmonary artery was also prominent. At operation the ductus measured three-quarters of a centimeter in length and one centimeter in width. Postoperatively, the blood pressure rose to 125/70, and the continuous murmur disappeared. When examined seven years later in 1947, the patient's cardiothoracic ratio was reduced to 42 per cent. Although a short systolic murmur was still audible over the pulmonic area, there was no evidence of recurrence of the arteriovenous fistula. From 1945 on, this patient served in the Merchant Marine and in the U. S. Army, thus demonstrating his physical capabilities.

We are indebted to Dr. Bigger for permission to include his forty-six cases with the forty-three upon whom we have operated, making a total of eighty-nine cases for analysis.

The majority of these patients have been operated upon between the ages of four and fifteen, but the age range extends from eighteen months to fifty-two years. Surgery is recommended routinely at an early age as prophylaxis against subacute bacterial endarteritis, cardiac failure, underdevelopment and reduced physical activity. Under usual circumstances surgical correction is desirable before the child starts school, but in the event of significant cardiac embarrassment, pronounced retardation of physical development, or frequent respiratory infections surgery is performed sooner. The infant in cardiac failure due to a patent ductus constitutes a semi-emergency.

The technical difficulties of the operative procedure are greatly increased in the adult where the large aorta and pulmonary artery reduce the exposure and increase the hazards of the dissection. Furthermore, sclerotic changes may render the ductus brittle. The patient past the age of forty-five, completely free of symptoms and with no evidence of cardiac embarrassment or other complications, is hardly a candidate for elective surgery of the ductus.

In most series the predominance of the female sex over the male has been reported as around two to one. We have found the sex predominance of the female somewhat higher in our series, slightly more than four to one, or sixty-four females compared to fifteen males.

We are also reporting a higher familial incidence than has been noted in the literature. Record[3], reviewing the entire literature between 1930 and 1952, reported patent ductus occurring in eleven fraternities with four additional instances involving parent and child. At least three instances of patent ductus occurring in identical twins have been reported. In our own series there were two sisters age six and nine, a mother age fifty, and a daughter age twenty-two, all operated upon, and a four year old girl whose father had been operated upon elsewhere for a patent ductus.

In 1940, Touroff demonstrated the feasibility of treating subacute bacterial endarteritis complicating patent ductus by surgical obliteration of the abnormal channel. The septicemia subsided rapidly unless the heart valves had also become involved. Subsequently, the operation was carried out in a number of cases of subacute bacterial endarteritis, but surgical accidents were rather frequent because of the extreme friability of the tissues in the presence of

From the Division of Thoracic and Cardiovascular Surgery, Department of Surgery, Medical College of Virginia.
Presented before the second annual meeting of the Virginia Surgical Society, January 22, 1955.
Received for publication June 29, 1955.

active infection. The operative mortality was approximately 25 per cent.

In spite of the facility with which subacute bacterial endarteritis can now be brought under control with appropriate antibiotic therapy, surgical intervention is still considered desirable, but only after a waiting period of two to three months following effective antibiotic therapy in order to allow healing of the ductal and periductal tissues.

Table I

Subacute Bacterial Endarteritis

Name	*Age*	*Organism*	*Treatment*	*Rx to Op.*	*Op. Findings*
V.M.	11	alpha streptococcus viridans	pen. (5 wks.) strep. (1 wk.)	13 wks.	moderate periductal scarring
A.H.	33	streptococcus fecalis	chlor .(1 wk.) pen. (7 wks.) strep. (5 wks.)	7 wks.	slight scarring
B.W.	10	negative	pen. strep. (?)	15 wks.	no abnormality
G.S.	36	streptococcus	pen. (2 wks.) (4 wks.)	8 wks.	slight periductal scarring
E.C.	17	alpha hem. streptococcus	pen. (4 wks.)	?	moderate periductal scarring

There have been five instances in this series in which subacute bacterial endarteritis was believed to complicate patent ductus, although in one case the diagnosis was not proved bacteriologically (Table I). In four of the five patients slight to moderate periductal scarring was noted at operation, but this did not interfere seriously with the dissection. A streptococcus fecalis organism was isolated in one instance and, because of the recognized difficulty of controlling this organism with antibiotics, obliteration of the ductus was performed without delay.

There have been many patients exhibiting varying degrees of cardiac enlargement. Out of forty-three consecutive cases in this series analyzed from this standpoint, fifteen showed cardiothoracic ratios greater than 50 per cent and, of these, nine exceeded 55 per cent. Eight patients in the entire series showed evidence of frank or early cardiac failure and are analyzed in Table II. Three of these eight received digitalis prior to surgery. Although some cardiologists have expressed doubt regarding the efficiency of digitalis in the presence of cardiac failure due to arteriovenous fistula, we have been impressed by the beneficial effects observed. In general, cardiac failure tends to occur in infancy or in late adult life. Four of our eight cases were thirty years or older, whereas two were under the age of two years.

Minor variations from the classical machinery murmur are not infrequently found. Under the age of one year the diastolic component of the murmur is usually absent. This finding is related to the equalization of diastolic pressures in the pulmonary

Table II

Cardiac Failure

Name	*Age*	*C-T Ratio Pre-Op.*	*C-T Ratio Post-Op.*	*Width of Ductus (cm.)*	*Pre-Op. B.P.*
C.E.	1½	65	55	.8	100/60
B.C.	2	50	43	.6	140/70
A.H.	31	56	48	1.1	140/70
L.E.	52	77	—	1.0	148/70
H. McG.	30	—	—	1.5	132/60
S.E.	17	—	49	1.0	148/64
T.S.	50	65	58	1.5	150/50
B.H.	5	59	50	1.0	130/50

and systemic circuits in early infancy. However, even past the age of one, in the presence of a large ductus with associated pulmonary hypertension, when the diastolic pressure in the pulmonary circuit equals or exceeds that in the systemic circuit, the diastolic murmur may likewise be absent. There were two infants in the group below the age of two years in cardiac failure, and in one of these the diastolic component was absent. Retrograde aortography was inconclusive but exploration was nevertheless carried out and a ductus found. In a patient fifty-two years of age with auricular fibrillation and in cardiac failure, the diastolic component could not be heard on admission, but became audible after compensation was partially established. In one other patient with a very small ductus proven at operation, the diastolic murmur was absent. In the examination of the infant, sedation may greatly facilitate auscultation of the diastolic phase by slowing the pulse and respiratory rates.

Large shunts causing the pulmonary flow to be several times that of the systemic flow may be present without producing pulmonary hypertension. When pulmonary hypertension is actually present a large ductus has almost always been found. In most instances the pulmonary hypertension declines following surgery. There is some evidence to indicate that, at least in certain instances, the pulmonary hypertension has existed since birth, probably through persistence of the fetal type pulmonary artery with its thick wall and narrow lumen as a protective mechanism to maintain a high pulmonary resistance and reduce the arteriovenous shunt. In patients with pulmonary hypertension of significant degree, there is frequently right to left shunting from pulmonary to systemic circuit during some phase of the cardiac cycle. A reversed ductus with predominant flow from pulmonary artery to aorta has not been recognized in our series. Patients with the latter condition present a rather atypical clinical picture with cyanosis in the lower extremities and perhaps in the left arm. Either a systolic or a diastolic murmur alone may be present. The electrocardiogram shows right ventricular hypertrophy. It is extremely doubtful whether closure of the ductus could benefit such a patient, even if surgery is survived, since the pulmonary hypertension is probably truly irreversible. In the doubtful cases the decision will be made at the operating table after studying the effect of temporary occlusion of the ductus. If the pulmonary artery pressure decreases somewhat after occlusion, rather than rising, permanent obliteration is indicated.

The clinical, radiological and electrocardiographic findings usually suffice to make the diagnosis of patent ductus arteriosus relatively simple. In the atypical case certain diagnostic studies may be required. Cardiac catheterization is helpful, showing as it usually does an elevation of blood oxygen saturation as the catheter passes from the right ventricle into the pulmonary artery. In the presence of pulmonary hypertension and pulmonary insufficiency, regurgitation of blood into the right ventricle may arterialize the ventricular sample also, introducing confusion and making the differentiation from interventricular septal defect difficult. If the catheter passes into the aorta, the diagnosis of ductus is established if one eliminates the possibility of an aorto-pulmonary septal defect in the ascending aorta. A lateral roentgenogram will clarify the location of the cardiac catheter.

Angiocardiography may be helpful by demonstrating a diverticulum in the concavity of the aortic arch at the origin of the ductus. Retrograde aortography causes opacification of the lung fields through the ductus simultaneously with opacification of the aorta. This procedure is especially useful in the infant and may be simply performed through the brachial artery.

Oxygen saturation studies on blood withdrawn from the right brachial artery and femoral artery may demonstrate a reduced oxygen saturation in the leg. This would indicate some right to left shunting from pulmonary artery to aorta through the patent ductus in the presence of pulmonary hypertension.

Among the entire eighty-nine cases there has been one operative death. There have been no other serious complications. There have been no recurrences. The one operative death, the first case in the authors' series, was a fifty-two year old female with auricular fibrillation, cardiac failure and tertiary syphilis. The aorta and pulmonary artery were tremendously enlarged and the ductus extremely brittle. Minimal manipulation in the region beneath the ductus produced hemorrhage. A partial occlusion clamp of adequate size was not available for use on the aorta. An initial attempt to ligate the ductus was abandoned because of hemorrhage, and upon clamping the ductus with Pott's clamps, the ductus snapped away cleanly from the aorta. The aorta was cross-clamped, but attempts at suturing the orifice were futile, since all sutures promptly cut through under systemic pressure. This region was resected and the aorta anastomosed, but, to accomplish this, a clamp had to be placed proximal

to the left carotid artery. Cardiac arrest resulted upon final release of the aortic clamps.

Because of the possibility of recanalization after ligation or suture ligation, especially in the treatment of large ducti, it is believed that division of the ductus is preferable in almost all cases. Out of forty-three cases operated upon in my own series, thirty have been divided and sutured. Twenty-two of the last twenty-four have been so managed. The technique which we have employed for division and suture of the ductus is described elsewhere[6].

References

1. Gross, R. E., and Hubbard, J. P.: Surgical Ligation of Patent Ductus Arteriosus, J.A.M.A., 112: 729, 1939.
2. Munro, J. C.: Ligation of Ductus Arteriosus. Am. Surg., 46: 335, 1907.
3. Record, R. J., and McKeown, T.: Observations Relating to the Aetiology of Patent Ductus Arteriosus. Brit. Heart Journal, 15: 376, 1953.
4. Graybriel, A., Strieder, J. W., and Boyer, N. H.: Attempt to Obliterate Patent Ductus Arteriosus in Patient with Subacute Bacterial Endarteritis. Am. Heart J., 15: 621, 1938.
5. Touroff, A. S. W., and Vesell, H.: Experiences in Surgical Treatment of Subacute Streptococcus Viridans Endarteritis Complicating Patent Ductus Arteriosus. J. Thoracic Surgery, 10: 59, 1940.
6. Bosher, L. H., Jr.: A Simplified Technique for Division and Suture of the Patent Ductus Arteriosus. Surgery (in press).

Let's Reminisce!

In the July 1874 issue of the Virginia Medical Monthly an item from the 27th Annual Session of the American Medical Association gave a report on Fractures. The following was noted: "Dr. S. was asked how to treat the fracture of the hip of a fleshy child 3 or 4 years old. He explained by taking a piece of paper and making a diagram of a bed on which to place the child, allowing its leg to hang over the edge, and said that in this way he had cured a child of a fractured hip without the application of any bandage. It is remarkable how quickly the bones of a child that age will unite. Treatment with plaster is difficult, because children are so fat that shrinkage of the limb is certain, and it will rattle about in its plaster case like a pea in a box." Dr. G. asked "How do you keep the child from twisting about?" Dr. S. replied, "They find out what hurts them and it is an astonishing fact that they like to be comfortable."

Dr. G. (St. Louis) was astonished that a gentleman of the profession from New York should come here and state that a compound fracture could occur and be reduced without shortening of the limb. He had never seen a case of this except in young people. The inflammatory process necessary to the adhering of the fractured bones renders it necessary that it should be shorter. He thought Dr. S's results barely possible and he wanted further evidence.

Dr. Q (Jersey City) did not believe that any surgeon thought himself able to restore 1 fractured femur in 10 to its original length; an absolutely accurate measurement was practically impossible. The proposition of a perfect cure seemed to him too absurd to require remark.

Drug Therapy of Tuberculosis

EDWARD S. RAY, M.D.
Richmond, Virginia

ALTHOUGH the treatment of each case of tuberculosis must be individualized, there are certain basic principles of drug therapy that are important in the effective management of this disease: (1) It is generally agreed that all active cases of tuberculosis should receive antimicrobial drugs. (2) A combination of two drugs should be given. (3) Drug therapy should be maintained for a minimum of twelve months and usually longer. (4) Cavities, when present, should be closed by drug therapy and collapse measures within the first eight months of drug therapy or they should be resected unless contra-indicated. (5) Resection should be performed under the protection of effective drug therapy.

Original treatment cases, with therapy uninterrupted and continued for twelve to twenty-four months, have a much higher cure rate than cases of tuberculosis that have interrupted or short-term therapy. It is possible to render 80% or 90% of cases of tuberculosis inactive if vigorous treatment is carried out at the time the disease is first diagnosed, and if this treatment is carried out for a sufficient length of time. In re-treatment cases, the percentage of cases becoming inactive drops from the above percentage to around 50%, emphasizing the importance of vigorous and continuous therapy in this disease. These figures also stress the fact that the treatment of tuberculosis should not be entered into lightly, and, once begun, therapy should be vigorously continued without interruption until the desired result in obtained.

Effective antimicrobial drugs given for an adequate period of time can be depended upon to resolve the reversible components of tuberculosis (the exudative type of disease and small caseous lesions). At the end of adequate drug therapy, there is usually left only scattered necrotic and caseous nodules, fibrosis, and in some cases residual cavitation (about 75% of cavities will close on drug therapy). The reversible components of tuberculous infections predominate in the acute exudative disease that occurs primarily in young people. Therefore, the most dramatic results of antituberculosis drug therapy is in young adults with recent exudative disease. Many of these cases will completely resolve under drug therapy, except for small, fibrotic nodules.

At the present time there are three drugs that have proved their value in the treatment of tuberculosis and that have at the same time been relatively free of toxic manifestations. They are Streptomycin, PAS, and Isoniazid. When used alone, each of these drugs loses the greater part of its effectiveness within a six-month period, and bacterial resistance develops rapidly after this period of time. It has been clearly shown that the administration of two of the antituberculosis drugs concurrently is a very important factor in delaying the emergence of resistant organisms. It has also been found that in the uncomplicated cases three drugs given together are not significantly more effective than are two drugs. Therefore, it is usually wise to give only two of the drugs at one time. Or the three drugs (Streptomycin, PAS, and Isoniazid), Streptomycin and Isoniazid are the more powerful against the tubercle bacillus, and when used alone these two are effective for short-term therapy. In contrast, PAS is relatively ineffectual when used alone, but, when combined with either Streptomycin or Isoniazid, delays bacterial resistance to these drugs. The combination of Streptomycin and Isoniazid has shown no important superiority over either one combined with PAS. Therefore, it is obvious that a combination of PAS with Streptomycin or with Isoniazid is usually the desirable combination. It is possible by this means to reserve an effective drug for use at a later date. Should it be necessary to carry out resectional surgery later, the results are much better if the surgery is carried out under the protection of effective drug therapy. Streptomycin and Isoniazid should be used together only when PAS is not tolerated.

Whether to use Streptomycin or Isoniazid with PAS depends upon several factors. In the outpatient and home-care management of tuberculosis, it is easier to administer Isoniazid with PAS, as both drugs can be administered orally. Also the two drugs may be combined in one tablet, which makes the administration very convenient. This is a frequently employed combination under circumstances where intramuscular drug therapy is impossible, as in rural communities.

Presented before the Virginia Academy of General Practice, May 15, 1955.
Received for publication June 1, 1955.

However, the combination of Streptomycin and PAS has the advantage of being as effective as other combinations, and at the same time, by using this combination, Isoniazid is reserved for possible use with Pyrazinamide. The combination of Isoniazid and Pyrazinamide has shown considerable promise, whereas combinations of Streptomycin and PAS with Pyrazinamide are apparently not nearly as effective. Another advantage of Streptomycin and PAS is that in the treatment of patients outside of the hospital who present disciplinary problems and who need close supervision of drug therapy, it is usually more satisfactory to have a nurse administer Streptomycin twice a week, at which time the intake of PAS can be closely supervised. Because of the gastrointestinal symptoms that frequently accompany the administration of PAS, patients are frequently tempted to omit this drug.

The dosages of these three drugs have been well standardized. Streptomycin is given intramuscularly in doses of 1 gm. twice a week, although in acutely febrile cases 1 gm. of Streptomycin is usually given daily until the fever returns to normal and then given twice a week. PAS usually is administered as the sodium salt (occasionally as the potassium salt or in a buffered preparation) and in dosage of 12 gms. daily by mouth; the drug is given three times daily, after meals, and in equal doses. If the patient cannot tolerate as much as 8 gms. of PAS, then it should be discontinued and Isoniazid substituted. The dosage of Isoniazid is 5 mgs. per kilo, or roughly 300 mgs. daily, by mouth for adults. This is usually administered in three divided doses and is extremely well tolerated by the patient.

In miliary and meningeal tuberculosis, Streptomycin, Isoniazid, and PAS are all administered concurrently. Streptomycin is usually given daily until the temperature returns to normal. There is an intramuscular preparation of Streptomycin and Isoniazid (Streptomycylidene Isonicotinyl Hydrazine Sulfate) that may be given to critically ill and comatose patients. It is wise to continue daily Streptomycin until there has been a very definite clinical improvement in the patient's meningitis, and thereafter it should be given twice a week. The duration of therapy in these cases is from eighteen months to thirty months. The most important drug in the management of miliary and meningeal tuberculosis is Isoniazid because of its diffusability of serous membranes. Evidence of the effectiveness of this drug has been demonstrated by the marked reduction in the mortality rate of tuberculous meningitis when this drug is used and also by the rare occurrence of meningitis in cases of miliary tuberculosis that have been treated with this drug. Intrathecal Streptomycin is no longer necessary in tuberculous meningitis when Isoniazid is administered.

The duration of therapy for all types of tuberculosis varies with the individual case, but a minimum period of twelve months is generally accepted at the present time. In advanced cases, drugs may be continued for two or more years, and in some cases for an indefinite period of time. The drugs are usually maintained for at least six months after the "target point" is reached. The "target point" refers to the stage of the disease when all cavities are closed, the sputum is negative, and when there is no longer any radiological evidence of a changing lesion (the reversible components of the disease having been resolved).

Drug therapy of tuberculosis is most effective where there are no open cavities. In the absence of cavitation, bacterial sensitivity to drugs will continue for twenty-four months or even longer. In the presence of open cavities, organisms begin showing resistance at the end of six months of drug therapy, and this resistance increases with time, so that at the end of one year practically all cases with an open cavity have a very high percentage of resistant organisms. It is therefore important to obtain closure of cavities within the first six to eight months of drug therapy. For this reason pneumoperitoneum is instituted in most patients with cavitation, and it is instituted early in the course of treatment. If at the end of three or four months' time there is a persistance of cavitation with little evidence that the cavities will close, then one should plan on surgical measures to close these cavities or to carry out resectional surgery to remove them.

It has also been found that blocked cavities and closed, caseous nodules removed at surgery frequently have many tubercle bacilli present, but these organisms often fail to grow when cultured. These organisms are probably attenuated rather than dead, but certainly one would expect them to be more susceptible to drug therapy and the natural defenses of the human host. Such changes in the growth of tubercle bacilli from *open* cavities have not been observed. This phenomenon was observed prior to drug therapy of tuberculosis and probably is partly responsible for the beneficial effects of collapse therapy in this disease.

Drug sensitivity studies are helpful in all cases where there is a positive culture for tubercle bacilli. While this is desirable in all cases of active tuberculosis, it is absolutely necessary in re-treatment

cases where previous drug therapy has been given, as it is otherwise impossible to determine whether the organisms are resistant to the previously administered drugs or not.

The basic principles of antituberculosis therapy are applicable to non-pulmonary tuberculous lesions (such as renal, lymph node, and bone tuberculosis), as well as to pulmonary tuberculosis. In other words, antituberculosis drugs are used to control the reversible lesions, with resection reserved for the irreversible and destructive lesions, regardless of the location of the disease.

Pyrazinamide is one of the most recent of the antituberculosis drugs that has shown promise of being useful in this disease. This drug is closely related to Nicotinamide. Used alone, its effectiveness is of short duration (four to six weeks), and its value as such is very limited. However, when combined with Isoniazid, its antimicrobial action is equal if not superior to any other combination of drugs, and the action of this combination suggests an eradicative, rather than a suppressive, type of action on the tubercle bacillus. Initial studies of Pyrazinamide combined with Streptomycin and with PAS have shown no similar therapeutic action. It is for this reason that I feel that when possible the combination of Streptomycin and PAS should be used and Isoniazid reserved for possible use with Pyrazinamide. This is especially true of advanced cases, where very prolonged drug therapy is required. Because of the potential toxic effects of this drug on the liver, its use at the present time should be restricted to hospitalized patients. Liver function studies must be performed each month on these patients, and the drug discontinued whenever evidence of liver damage develops. Such evidence of toxicity occurs in about 15% of cases. There have been several deaths from hepatitis where this drug has been used, and it is because of this danger that this drug is being used with caution at the present time. It is very probable that within the near future Pyrazinamide will become relatively safe through adjustments in its dosage and through the use of liver-protective agents and diet. If this drug is found to be safe, it will become a very powerful addition to our drug therapy of tuberculosis when combined with INH.

Viomycin is of some value in cases that are resistant to the other drugs and where short-term drug therapy is needed for coverage of surgical procedures. As with the other antituberculosis drugs, it is more effective when combined with one of the other drugs to which the tubercle bacilli are sensitive. However, as with Pyrazinamide, the toxicity of this drug limits its usefulness. About 15% of cases develop toxic reactions that force discontinuance of the drug. These toxic manifestations are equally divided between allergic reactions (fever and rash), renal toxicity (albuminuria and renal failure), nausea and vomiting, and 8th cranial nerve involvement. The dosage of Viomycin is 2 gms. intramuscularly, twice a week.

Oxytetracycline (terramycin) has been given with some success in place of PAS and probably is as effective as this drug when given in a dosage of 5 gms. daily. There is some laboratory indication that this drug is not effective when given with Isoniazid. A disadvantage of Oxytetracycline is the occasional case of staphylococcal enterocolitis that develops during its use.

Cycloserine (seromycin) is the most recent of the anti-tuberculosis drugs. Initial studies have indicated that this drug is effective against the tubercle bacillus, but it has been used for too short a time and there are too few cases for evaluation of its usefulness. Its toxic potentialities have also to be determined.

Summary

Experience with anti-tuberculosis drugs have served to emphasize the importance of continuous, uninterrupted therapy of tuberculosis until the disease is rendered inactive. This means, in most cases the use of two of the anti-tuberculosis drugs for a minimum of one year, and frequently for a period of 2 years or more.

In the treatment of cases that have irreversible disease, one should perform surgery under the protection of effective drug therapy and before the tubercle bacilli have become resistant to the antituberculosis drugs.

An Interesting Case of Histoplasmosis

JAMES R. YORK, M.D.
Berryville, Virginia

DARLING, in 1909, reported the presence of protozoon-like organisms in the livers and spleens of natives of Panama, who had died from a systemic viceral disease of unknown etiology. The organism was named Histoplasma Capsulatum and was later proved to be a fungus. More recently, however, in the Mississippi Valley area of the United States a high percentage of the natives were found to have positive reactions to histoplasmin skin tests. The presence of calcified lung lesions in some of these persons who had positive histoplasmin, but negative tuberculin tests, gave support to the existence of a rather benign type of pulmonary infection.

The case I am presenting shows an interesting sequence of events in the development of what now seems to be a definite systemic infection of histoplasmosis. Mr. W. S., a 56 year old white male, electrician, first presented himself in November, 1952, complaining of a sore mouth with recurring mouth ulcers, tiredness, backache, and painful calf muscles for the preceding five months. He has also had occasional low grade fever for the past year and frequent post-prandial vomiting. There had been a 30 to 35 pound weight loss during this period. The patient gave a past history of having served in the Panama Canal Zone in the Army from 1920 to 1923 and recalled an episode of mouth and throat ulcers about six months after his discharge. Since then he has lived in Michigan and Virginia. Physical examination at that time was essentially negative except for the ulcerative stomatitis and slight enlargement of the liver. Routine complete blood count, urinalysis and agglutinations were normal. A routine chest x-ray was reported as negative. He was treated with crude liver injections, well balanced diet with supplementary multivitamins, and hydrogen peroxide mouth washes and showed a slow improvement. By January, 1954, the stomatitis had cleared; he had gained 12 pounds and generally felt much better. However, two months later, the weakness and stomatitis returned and a biopsy was taken from a persistent ulcer of his gum. This showed a non-specific chronic stomatitis. Nausea and vomiting, weight loss and low grade fever returned, and the patient became progressively weaker. He was sent to the University of Virginia Hospital for further definitive medical study. While there, he had a positive histoplasmin skin test, Addisonian eosinophile response to I.V. and I.M. ACTH, 17 Ketosteroid excretion consistent with Addison's disease, and the Kepler water test showed inability for normal diuresis. On the third hospital day, his blood pressure (previously normal) dropped to 82/60, and nausea and vomiting became severe. He responded nicely to adrenal cortical extract and cortisone, and was later discharged on cortisone 12.5 mg. b.i.d., NaCl 1 gm. t.i.d., multivitamins, and a high protein high caloric diet. The diagnosis was hypo-adrenalism, idiopathic form. He did well for several months and then some weakness and anorexia returned and cortisone was increased to 12.5 mg. t.i.d. He received 50 to 30 mg. DOCTMA every two weeks and was taking 1 to 3 gms. of NaCl daily. His blood pressure ranged from 105/70 to 80/55. At this time, his Addison's disease was well controlled and he did well until May, 1954, when he again developed a severe ulcerative stomatitis. Biopsies were again taken and the report was the same as previously. Cultures from the lesions failed to grow histoplasmosis. The ulcers grew worse became quite painful, and in June the patient was again sent to the University of Virginia Hospital. While there histoplasmosis was cultured from the lesions. He was treated with stilbamidine and had a remarkable regression of the ulcers. He returned home in July with the ulcers completely healed. The patient did well and gained weight and his Addison's disease was still well controlled. In October, 1954, he developed an upper respiratory infection with pharyngitis and laryngitis. He was given Achromycin 250 mg. q. 6 h., his cortisone was increased to 25 mg. t.i.d., and the condition cleared only to recur in late December. This time, he failed to respond, hoarseness became worse and swallowing became difficult. His pharynx and larynx were hyperemic and edematous, but no ulcers were seen on examination. In January, 1955, he was again hospitalized at the University of Virginia Hospital because of increasing pain and dysphagia. He has since been transferred to the National Institute of Health at

Presented before the Northern Virginia Medical Society, April 12, 1955.
Received for publication May 19, 1955.

Bethesda, Maryland, and is still there at this writing.

It is possible that the infection, histoplasmosis, was acquired when the patient was in Panama between 1920 and 1923; but is it likely that it remained dormant for thirty years? In any event, the infection probably gained entrance *via* the alimentary tract since chest x-rays have always been negative. I feel that it is probable that histoplasmosis infection infection involving the adrenal glands is the cause of this man's hypo-adrenalism.

I would like to acknowledge the co-operation of Dr. K. R. Crispell and the Medical Staff of the University of Virginia Hospital in the management of this case, and their reports, which furnished part of the material for this paper.

ADDENDUM: The patient has died at Bethesda since the presentation of this paper. Gross pathological findings at autopsy were: adrenals replaced by yellowish tissue and calcification, necrotizing papillitis of kidneys, complete erosion of the left vocal cord and left half of the epiglottis with ulceration and edema of pharynx and larynx. It was felt that the necrotizing papillitis and resultant uremia were responsible for the patient's demise.

REFERENCES

Harrison, T. R.: "Principles of Internal Medicine", p. 955, The Blakiston Company, Philadelphia, 1950.

Coffee Advertising Claims.

New tests of decaffeinated coffees by the American Medical Association's chemical laboratory support various advertising claims that 97 per cent or more of the caffeine can be removed from these coffees. A report in the September 24th Journal of the American Medical Association said the average cup of decaffeinated coffee—either regular or instant—has about one-fortieth of the amount of caffeine present in regular ground or instant coffee.

An earlier laboratory report in the Journal of July 23, 1955, said the caffeine content of both decaffeinated coffees ranges from one third to one eighth of the content in regular ground coffee. In addition, it warned that advertisements implying almost total removal of caffeine "must be viewed with skepticism." In reference to the first report, the laboratory said, "the data new presented indicates that inaccurate results were reported in the original article of July 23 in regard to the caffeine content of instant and decaffeinated coffees."

It was found that the original testing method "leads to erroneous values for caffeine in decaffeinated coffees." The new procedure gives results that "more accurately represent the actual caffeine contents of coffees."

The laboratory also found in retesting regular instant coffees that they have about the same amount of caffeine as regular ground coffees. The original tests had indicated that a cup of regular instant coffee has only about half as much caffeine as regular ground coffee.

Contradict 100-Year-Old Idea.

Two Detroit physicians may have upset a 100-year-old theory in the diagnosis of one type of heart failure. They said it has been an "accepted maxim" that in myocardial infarction, low crackling sounds are usually heard in the right side of the chest during breathing. They found the opposite to be true in over half of 200 patients with myocardial infarction. Less than 10 per cent had the sounds on the right side, while others had the noises on both sides or not at all.

Drs. Jack M. Kaufman and Nancy T. Caputo of the department of cardiology, Harper Hospital, Detroit, said the reasons for the left-sided sounds are not completely understood. However, they said their discovery should be useful in diagnosing some cases of myocardial infarction, in which an area of heart muscle cells becomes deadened.

Their report appears in the August 27th Journal of the American Medical Association.

Medical Nomenclature and Dermatology

ASHER A. FRIEDMAN, M.D.
Norfolk, Virginia

THE language of Medicine has been the source of confusion, irritation and dismay not only to the laity but to the physician as well. As students the thousands of names, synonyms, eponyms, phrases of all kinds have caused much brain fatigue and mental agitation. There is no branch of medicine today that is more inveighed against as to complicated and strange names as in the field of dermatology. The accusation carries the implication that the dermatologist is either ignorant of the disease or wishes to assume a superiority by special knowledge by using intricate and involved names. This accusation is a serious one and I would like to examine the charge.

Dermatological names are strange sounding to the medical public because the general physician has had so little training as a medical student and practitioner with dermatologic problems. The names of the general diseases of medicine, surgery, and obstetrics are more normal sounding because they are dinned into his ears through out the four years of medical school, in his internship and residency and in his medical reading, assimilating the terms of medicine in general. Not so familiar are dermatologic names. The two or three weeks of dermatology training in a medical school are a babble of confusion and the student is asked to absorb a whole new branch of learning in a ridiculously short time.

This short period of time makes every dermatologic term seem strange to the student, and later, as the practiving physician, they are still as unfamiliar and novel. There is no pounding of such terms into his ears for four years of training. As a result, his knowledge and capacity to talk, work, and deal with dermatology is limited.

Dermatologic names, however, have a simple logical ring, and their names are descriptive of disease processes. They thus form a convenient and useful function, in many cases more so than general medical terms.

Let us examine a few and compare them with Medicine's names. For instance, the disease lichen planus describes the basic feature of the disease—i.e., flat papule. Is not this as good or better than nomenclature of disease such as Banti's syndrome. The latter gives no hint and help to anyone. Only by prior thorough knowledge does Banti's convey a meaning to the physician. The dermatologic disease called erythema multiforme bullosum in its title practically covers the description of the disease —namely, redness of many different shapes with blisters. Is this not better than Hirschprung's disease or Ayerza's disease? Does not dermatophytosis carry as much significant meaning as hypertension? The ignorance of dermatology really is the background for the accusations against it.

The accusation that dermatologic nomenclature is backward, confused, and unnecessarily complicated is not true. The general medical public can best correct this situation by increased instruction in medical school, in post-graduate training and in manifesting more interest in the study of an important organ of the body.

319 Wainwright Building.

Received for publication June 13, 1955.

Public Relations . . . .

County Society Officers' Conference

The 1955 County Society Officers' Conference of The Medical Society of Virginia was held at the Williamsburg Lodge on Saturday, September 17.

Representatives of 18 component societies and the Woman's Auxiliary were on hand to discuss pertinent problems of the day and to hear several outstanding speakers.

Dr. Julian P. Price, member of the Board of Trustees of the American Medical Association, delivered an inspiring message on "A Doctor's Responsibility to His Community". Dr. Price emphasized that a physician should fulfill his responsibilities toward public education, youth work, charity, service organizations and, most important, the Church.

A proposal for group professional liability insurance on the State level was discussed by Dr. Frank A. Farmer, Chairman of our Special Insurance Committee. The proposal was to be presented to Council and the House of Delegates during the Annual Meeting.

An excellent panel discussion on "PR Problems in the Physician's Office" was moderated by Dr. John Wyatt Davis, Jr., Lynchburg. Members of the panel were Mrs. Nell Arthur, Mrs. Doris Paris, Dr. William H. Barney and Dr. J. S. Morris, all of Lynchburg.

Mediation committees and their proper functions were the subjects of a spirited discussion during the special problem session. The procedure employed by the Lynchburg Academy of Medicine was particularly interesting.

One of the most entertaining features of the program was conducted by Dr. Mason Andrews, Norfolk. Dr. Andrews gave pointers for producing medical TV programs and showed a film on a Norfolk program being prepared and presented. The film is most instructive and Dr. Andrews would be pleased to make it available to those component societies wishing to undertake similar projects.

Book Announcements . . . .

Handbook of Pediatrics. By HENRY K. SILVER, M. D., Associate Professor of Pediatrics, Yale University School of Medicine; C. HENRY KEMPE, M. D., Assistant Professor of Pediatrics, University of California, School of Medicine; HENRY B. BRUYN, M. D., Assistant Professor of Pediatrics and Medicine, University of California, School of Medicine, etc. Lange Medical Publications, Los Altos, California. 1955. 548 pages. Illustrated. Price $3.00.

The Medical Significance of Anxiety. By RICHARD L. JENKINS, M. D., Chief, Psychiatric Research, Psychiatry and Neurology Service, Veterans Administration, Washington, D. C. The Biological Sciences Foundation, Lt., Washington, D. C. 1955. 46 pages. Price $1.00.

New and Nonofficial Remedies. Containing Descriptions of the Articles Which Stand Accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1955. Issued Under the Direction and Supervision of The Council on Pharmacy and Chemistry of the American Medical Association. J. B. Lippincott Company, Philadelphia. 1955. xlviii-653 pages. Price $3.35.

Ageing—General Aspects. Ciba Foundation Colloquia on Ageing. Volume I. Editors for the Ciba Foundation—G. E. W. Wolstenholme, O. B. E., M. A., B. Ch. and Margaret P. Cameron, M. A., A. B. L. S. Assisted by Joan Etherington. Little, Brown and Company, Boston. 1955. xii-255 pages. With 38 Illustrations. Price $6.75.

The Human Adrenal Cortex. Ciba Foundation Colloquia on Endocrinology. Volume VIII. Editors for the Ciba Foundation—G. E. W. Wolstenholme, O. B. E., M. A., M. B., B. Ch. and Margaret P. Cameron, M. A., A. B. L. S. Assisted by Joan Etherington. Little Brown and Company, Boston. 1955. xv-665 pages. With 227 Illustrations. Price $10.00.

The Prevention of Disease in Everyday Practice. By ISADORE GIVNER, B.S., M.D., F.A.C.S., Associate Clinical Professor of Ophthalmology, New York University Post-Graduate Medical School; Director of Ophthalmology, New York City Hospital; etc. And MAURICE BRUGER, M.Sc., M.D., C.M., F.A.C.P., Associate Professor of Medicine, New York University Post-Graduate Medical School; Attending Physician and Director, Department of Clinical Pathology, University Hospital; etc. And Contributors. The C. V. Mosby Company, St. Louis. 1955. 964 pages. With 50 Text Illustrations and Frontispiece in Color. Price $20.00.

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

ANNUAL STATISTICAL SUMMARIES FOR THE FOUR MENTAL HOSPITALS, TWO TRAINING SCHOOLS, DeJARNETTE SANATORIUM AND FIFTEEN MENTAL HYGIENE CLINICS IN THE STATE OF VIRGINIA

GENERAL STATISTICS FOR THE YEAR ENDING JUNE 30, 1955

VIRGINIA DEPARTMENT MENTAL HYGIENE AND HOSPITALS

	Grand Total	Total Hospitals	Central	Eastern	South-western	Western	Total Training Schools	Lynch-burg	Peters-burg	DeJarnette Sana-torium
On books July 1, 1954	15,593	12,824	5,107	2,805	1,809	3,103	2,769	2,500	269	221
In hospital	13,242	10,856	4,472	2,193	1,463	2,728	2,386	2,177	209	173
In family care	13	6	.....	.....	.....	6	7	7	.....	.....
On trial visit	2,177	1,840	589	566	317	368	337	294	43†	48
On escape	161	122	46	46	29	1	39	22	17	.....
First admissions during year	2,575	2,276	821	580	311	564	299	243	56	180
Readmissions during year	1,525	1,510	255	545	207	503	15	14	1	352
Transfers during year	58	43	3	17	6	17	15	11	4	11
Total under treatment	19,751	16,653	6,186	3,947	2,333	4,187	3,098	2,768	330	764
Discharges during year	2,428	2,290	655	645	309	681	138	81	57	518
Deaths during year	867	813	266	228	116	203	54	52	2	24
Transfers during year	142	128	37	45	17	29	14	11	3	13
On books June 30, 1955	16,314	13,422	5,228	3,029	1,891	3,274	2,892	2,624	268	208
In hospital	13,830	11,303	4,640	2,239	1,530	2,894	2,527	2,299	228	166
In family care	11	4	.....	.....	.....	4	7	7	.....	.....
On trial visit	2,365	2,022	562	744	341	375	343	309	34†	43
On escape	108	93	26	46	20	1	15	9	6	.....
Percent increase in residence last year	4.3	4.1	3.8	2.1	4.6	6.1	5.6	5.6	9.1	2.5
Total admissions since July 1*	4,158	3,829	1,079	1,142	524	1,084	329	268	61	543
Increase over last year	327	272	—9	122	5	154	55	58	—3	23
Total separations since July 1*	3,437	3,231	958	918	442	913	206	144	62	556
Increase over last year	95	145	76	73	—24	20	—50	—57	7	16
Percent out on trial visit or escape	15.2	15.8	11.2	26.1	19.1	11.5	12.3	12.1	14.2	20.7
Rated capacity	10,964	8,964	3,398	1,850	1,407	2,309	2,000	1,818	182	171
Overcrowding	2,866	2,339	1,242	389	123	585	527	481	46	—6
Percent overcrowding	26.1	26.1	36.6	21.0	8.7	25.3	26.4	26.5	25.3	—3.5
Average daily population	13,585	11,067	4,570	2,216	1,486	2,795	2,518	2,291	227	169
Per capita maintenance cost per year	$ 847.45	$ 836.45	$ 703.57	$ 925.89	$ 944.43	$ 925.40	$ 895.79	$ 880.43	$1,050.79	$ 2,693.82
Per capita maintenance cost per day	2.322	2.291	1.928	2.537	2.587	2.537	2.452	2.412	2.879	7.380
Increase over same period last year	0.135	0.152	0.073	0.290	0.060	0.235	0.050	0.067	—0.104	0.423

NOTES:
*Includes transfers between hospitals.
†Two on special hospitalization.

SUMMARY OF OUT-PATIENT CLINIC ACTIVITIES FOR THE YEAR ENDING JUNE 30, 1955

	Referrals						Source of Referrals					
	On Books July 1/54	New	Re-opened	Total	Closed	On Books June 30/55	DPW & Health	Physi-cians	Family	Schools	Courts	Other
Total	3,355	3,010	444	6,809	4,346	2,463	708	690	1,245	360	154	267
Alexandria	155	172	16	343	215	128	16	57	42	25	15	33
Arlington	123	170	31	324	184	140	15	42	47	35	33	29
Charlottesville	61	59	14	134	69	65	9	26	22	6	4	6
Educational Therapy	95	56	33	184	8	103	22	7	16	24	11	8
Fairfax	289	221	20	530	329	201	13	31	140	22	2	8
Lower Peninsula	91	184	29	304	249	55	38	23	75	29	24	24
Lynchburg	49	122	21	192	130	62	13	13	75	19	12	11
Medical College	890	467	44	1,401	579	822	74	369	26	16	3	19
Memorial Guidance	438	525	140	1,103	852	251	196	5	372	32	17	43
Mountain Empire	434	233	2	669	449	220	94	16	31	84	5	5
Norfolk	137	116	9	262	239	23	7	16	63	4	3	32
Portsmouth	371	211	19	601	426	175	43	65	56	33	17	16
Roanoke	132	296	40	468	338	130	112	2	187	.....	4	31
Southampton*	.....	15	.....	15	.....	15	11	4	.....	.....	.....	.....
Tidewater	90	163	26	279	206	73	45	14	93	31	4	2

*Clinic opened January 1955.

Few Physicians Over 65 Retire

The majority of physicians over 65 remain important and necessary members of the health teams in their communities, according to a recent poll conducted by *Medicine in the News,* a Schering Corporation monthly publication which brings a breakdown of important world medical news to 120,000 physcians nationwide.

A questionnaire sent to physicians over 65, the conventional age of retirement, reveals that: (1) eight of every ten are still in active practice; (2) one of every two sees more than 40 patients in an average week; (3) one of every four treats patients of all ages; one of every two sees chiefly patients between 40 and 60; and (4) one of every four will handle all types of cases; three of every four do not accept surgical cases.

Comments on some of the questionnaires showed remarkable activity on the part of some physicians well over 65. A Virginia physician, for example wrote: "I am now 86 years old and treat about 25 patients a week." Another wrote: "I can now state that I have a larger practice at 67 years of age than at any time in my 40 years of practice." Still another made the amazing statement: "On December 24, 1954, I was 90 years old. I have been in practice 60 years. I treat 40 or more patients a week, although I no longer do any surgery. Most of my patients are over 40."

Over-all results of the poll, published in the September issue of *Medicine in the News,* showed that while many physicians restrict their activities after 65, general retirement at that age for the majority seems not only undesirable but impossible.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Retrolental Fibroplasia

Retrolental Fibroplasia is a disease of premature infants which usually becomes apparent during the first few days or weeks of life, and often leads to partial or complete loss of vision.

This condition was first recognized in premature infants in 1942 and is now first among causes of blindness in children. The importance of the disease as a public health problem is coming more and more into prominence as shown by reports from various state schools for the blind. California figures shows 77% of total known cases of blindness in preschool children from 1942-1954 were due to this disease. These figures may not be unlike those from other states.

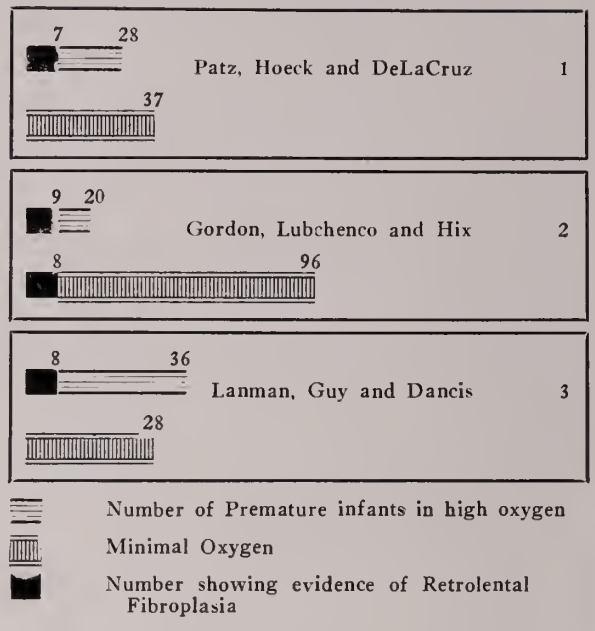
There were approximately 7,592 premature born in the State of Virginia during the year 1954. Most of these infants are hospitalized either by their own families or through funds from some other source.

Even if heartache of the parents and members of the family is disregarded, a public health problem is produced by having an enormous expense attached to the care of a case of blindness. It is not unusual to have the hospitalization of a premature infant amount to $1,000 or more. This is only the beginning of a long period of care and training of an individual who will carry a handicap through life.

Many premature infants receive oxygen either while being transported to the hospital or during their stay in the hospital. Most reports incriminate high concentration of oxygen over a long period of time but at the same time favor concentration of oxygen not to exceed 40% and this used at varying intervals. Its use is to be discontinued as soon as the infant's condition warrants.

Intensive and extensive research has been carried out in efforts to uncover the etiology of the disease. A summarization of 3 well-controlled clinical studies on the effects of high and low oxygen concentrations is shown in the figure above.

All infants in the first 2 series had birth weights to 1,500 gm. (3.3 lbs.), in the the third series from 1,000 to 1,850 gm. (2.2 to 4.1 lbs.). Criteria for evidence of retrolental fibroplasia were as follows: Tops—retinal detachment (5 of 7 had membranes); Center—any detectable permanent change (in minimal oxygen group only 2 of 8 had retrolental membranes; in high oxygen 7 of 9 had membranes);



Bottom—irreversible cicatricial lesions (membranes).

Information on the prevention of Rotrolental Fibroplasia has been widely circulated in professional journals. In spite of this, the National Society for the Prevention of Blindness recently reported that many hospitals have not taken definite action in this regard.

1. Patz, A., Hoeck, L. E. and DeLaCruz, E.: Studies on the Effect of High Oxygen Administration in Retrolental Fibroplasia, Am. J. Ophth. 35: 1248, 1952.
2. Gordon, H. H., Lubchenco, L. and Hix, I: Observations on the Etiology of Retrolental Fibroplasia, Bull. Johns Hopkins Hosp. 94: 34, 1954.
3. Lanman, J. T., Guy, L. B. and Dancis, J.: Retrolental Fibroplasia and Oxygen Therapy, J.A.M.A. 155: 223, 1954.

Monthly Report of Bureau of Communicable Disease Control

	Sept. 1955	Sept. 1954	Jan.-Sept. 1955	Jan.-Sept. 1954
Brucellosis	2	7	24	37
Diptheria	2	1	19	27
Infectious Hepatitis	44	158	920	3111
Measles	52	74	3744	23440
Meningococcal Infections	1	1	72	80
Poliomyelitis	59	164	258	419
Rocky Mt. Spotted Fever	7	7	43	35
Streptococcal Infections	405	183	5558	3758
Tularemia	1	3	11	29
Typhoid Fever	2	7	32	42
Rabies (In Animals)	29	12	295	284

Woman's Auxiliary . . . .



New President

Dynamic, competent, personable Mrs. M. W. Glover ("June" to one and all) was installed as president of the Woman's Auxiliary to The Medical Society of Virginia on October 18.

The Auxiliary is the recipient this year of June's innumerable experiences in organizations not only of which she has been an officer but of those she has helped to found. Were I called upon to do a thumb nail description of her, I would choose to word "ubiquitous" and before her term expires, you will recognize the merit of it—regarding this, we'll let the record speak:

June was a charter member of the Arlington Auxiliary and later a recording secretary. In '48-49, she was president-elect and in the following year served well and vigorously as president. Also acted as public relations chairman and social chairman (both naturals for her). In retrospect there seem to be few positions in the Auxiliary which haven't profited by her service. She has duplicated this on the state level in the positions of third-vice president, public relations chairman and, as president-elect, has been organization chairman.

She has extended her administrative ability into other fields as well, in that she was the past president of the Arlington Republican Woman's Council and vice chairman of the County Committee.

June is also a member of the Organized Women Voters and the Neighbors Club. Along with all the qualities evidenced by the above positions, she has dramatic ability and has been in several of the plays presented here in Arlington, as well as chairman of the dramatic section of the Neighbors Club.

One would think that to such an involved individual, there would be no time remaining for personal activities but—not so. June is an avid bridge player and would be the first to admit she's a good one. Not only that but she bowls violently and excels at it.

With the other hand she has managed to run her attractive home, raise three lovely daughters and be the good wife of a busy doctor (her thoughtfulness of other people is legend); has worked faithfully for Arlington Hospital, Community Chest and the Red Cross.

June graduated from the nursing school of Gallinger Hospital (now known as D. C. General) and has been an R.N. since 1931. Arlington has known her since 1940 when she came here from Ohio.

No question but what the Auxiliary's year will be a fruitful and exhilarating one under June's vibrant leadership. intent upon enthusiastic growth and service.

MILLIE OSTERGARD

Alexandria.

The Auxiliary to the Alexandria Medical Society recently held its first meeting of the season at the home of Mrs. S. H. Williams, with Mrs. Harrison Picot as co-hostess.

The projected plans for the coming year were reviewed. Among these are a rummage sale in the near future and for sponsorship of a performance by the Little Theatre of Alexandria. Mrs. William J. Weaver, president, announced that the auxiliary is sponsoring a full scholarship for a nursing student at the Alexandria Hospital this year.

After the business meeting and refreshments, the members were entertained by the showing of color slides and movies of Spain, Italy, Germany and England, countries visited last spring by Dr. and Mrs. Williams and Dr. and Mrs. Picot.

MRS. JAMES D. MILLS
Publicity Chairman

Richmond.

The Auxiliary to the Richmond Academy of Medicine had its September meeting on the fourth Tuesday, a new meeting time to be tried this year. Mrs. Edward G. Davis, Jr., was luncheon chairman and the speaker was Mrs. Overton Dennis. She was introduced by Mrs. Fred Finch, chairman of the day, and gave interesting highlights in her life-long enthusiasm for Mental Health.

There was no October meeting of this Auxiliary because of the state meeting in which they played a big part.

Margaret Meador (Mrs. Carl W.)

Wise.

This Auxiliary met at the home of Mrs. C. H. Henderson, President, on September 7th. Reports of various committees were given. Mrs. D. B. Jones, treasurer, reported that the bake sale held on September 3rd netted $46.26. She also reported that $85.00 had been collected for the American Medical Education Foundation in a fund raising drive. A report from the Nurse Recruitment Committee announced that a Future Nurses' Club is planned at the Norton High School.

Mrs. Eugene Bene
Publicity Chairman

Petersburg.

This Auxiliary held its September 27th meeting at the home of Mrs. Munford Yates. Mrs. Kirby Hart, new president, presided. Mrs. Herbert Jones and Mrs. Meade Edmunds, co-chairmen of the Ways and Means Committee, presented tentative plans to raise the $300.00 necessary to finance the Nursing Education Foundation this year.

New chairmen announced for the year are: Mrs. Glenn Phipps, rummage sale; Mrs. William S. Grizzard, committee to aid the Association for Mentally Retarded Children; Mrs. Herman Farber, revisions; Mrs. William Grossman, Nursing Education Foundation; and Mrs. Francis Taylor, childrens clothing to go to Welfare Association.

Ruth L. Grizzard (Mrs. William S.)
Publicity Chairman

Mental Deficiency.

A recent study of more than 600 mentally defective children appeared to indicate that certain abnormalties of childbearing play a part in the development of mental deficiency. The study of Dr. Benjamin Pasamanick, Columbus, Ohio, and Dr. Abraham M. Lilienfeld, Buffalo, N. Y., is reported in the September 17th Journal of the American Medical Association.

Records of 639 mentally defective children born in Baltimore from 1935 through 1952 showed "significantly more" complications of pregnancy and delivery, prematurity, and abnormal conditions of the new born than among a similar number of children without mental defects.

The nonmechanical abnormalities such as bleeding during pregnancy or blood infection, which may result in oxygen insufficiency for the unborn infant, appeared to be more important than mechanical factors such as difficult delivery.

The factors that appear to be associated with mental defect are similar to those previously found by the physicians to be associated with cerebral palsy, epilepsy, and childhood behavior disorders.

The physicians said there are several "reproductive casualties," consisting of brain damage incurred before, during, and immediately after birth, resulting from abnormalities during these periods. Mental retardation should be added to the group, which already includes spontaneous abortions, stillbirths, newborn deaths, cerebral palsy, epilepsy, and behavior disorders. These disorders no longer can be thought of as separate and distinct diseases, but rather must be thought of as types of chronic cerebral (brain) injury.

Their findings focus attention on the need for further research in the cause, diagnosis, care, and prevention of these neuropsychiatric disorders.

The survey was aided by a grant from the Foundation for Mentally Retarded and Handicapped Children of Baltimore.

President's Message . . . .

THE Medical Society of Virginia had its beginning in 1821, two years before the enunciation of the Monroe Doctrine. Today, 2557 physicians hold membership in the Society, by virtue of their respective identifications with its 46 component societies.

Because it is feasible for the Society to meet only once during the year, its work is accomplished primarily by the officers, executives, and committee members thereof.

The legislative body of the Society, the House of Delegates, is composed of representatives from the component societies and selected by them. At its annual meeting the House elects a Councilor from each Congressional District, one who has previously been nominated by the Delegates from that district. The Council together with the duly elected officers of the Society are then charged with conduct of whatever business may arise during the interims between annual meetings. To assist the council and the officers in this considerable undertaking, a number of standing (one appointment) and special committees are formed each year. Such committees meet frequently, study their respective assignments and, after careful deliberation, make appropriate recommendations to the House of Delegates for its consideration when in session. Since the Society relies so heavily upon committees for the promotion of its scientific and organization work, it must exercise great care to see that capable members are selected to serve on the various committees.

To assist in the important work of choosing committees, the component societies, during the past several months, have been asked to nominate physicians whom they consider to be proved leaders for committee assignment. By so doing it has been possible to appoint to the committees many new members who are talented, experienced, interested, and capable of working with others. In fact, the response has been so profuse that places have not been available for all of those suggested. However, it is probable that the physicians for whom places have not been found on regular committees may be called upon to serve during the year as members of special committees. Also, their names will be put on file and made available to the officers of the Society for future use when making selections for its committees.

The Society has played a prominent role in bringing the profession and practice of medicine in Virginia to its present high level. During this coming year we may anticipate continued advancement of scientific knowledge amongst our members. Since it appears likely that further attempts will be made to alter the private practice of medicine in favor of more and more government control and subsidy, it seems that we as members and as individual physicians will need to exert vigilance to resist the interference of any such third party in the conduct of medical care and medical service to the sick in Virginia.

Through the medium of this page, it is the President's task to present each month important developments relating to the work of the Society. This I shall attempt to do.

James P. King

President

Editorial....

Our New President

DR. JAMES P. KING, our new president, is a man upon whom his community has learned to call for advice and guidance in many fields with the certainty of a ready response and able assistance. With this background of community service, in local, state and national aspect, it is only natural that he would be called upon to serve again, this time in the place of leadership and trust as the president of The Medical Society of Virginia.

Jim King was born in Marion, Virginia, on December 12, 1902, where his father, Dr. John C. King, was practicing medicine. His mother was Fannie Price King and Jim was one of four children. His educational career was started in Marion at the public school and continued in the Radford High School when he moved there with



JAMES P. KING, M.D.
President, The Medical Society of Virginia

his family. From 1922 to 1926 he attended Virginia Polytechnic Institute, in nearby Blacksburg. Later (1926-1930) endeavors at the University of Virginia earned him the degree of Doctor of Medicine and the appointment as first Resident in Psychiatry, University Hospital, Charlottesville. After his training at the University, Dr. King returned to Radford to join his father in the practice of psychiatry at Saint Albans Sanatorium. Here he assumed much of the responsibility for the physical maintenance of, and the improvement of that establishment. Through the years of his management

he has improved its physical plant to the point that it is a show place as well as a most modernly equipped and staffed Sanatorium.

Soon after returning to Radford to practice with his father, he met and married the charming Anna Whitman of Roanoke. Together they established their delightful home in Radford where they have reared a family of four, two sons and two daughters: James P. King, Jr., who is following in his father's footsteps and is a medical student at his father's Alma Mater; Ann King Cloyd, who has recently married and is living in the South; William W. King, who is a student at V.P.I. and a footballer to be watched; and last, but definitely not least, Miss Susan King, age 6, who lives at home and attends to all her queenly duties with ease.

Dr. King as a member of the U.S. Naval Reserve saw active duty as Lieutenant Commander, Medical Corps, from 1943-46. He, at present, is an active member of his local medical societies, the Montgomery County Medical Society and the Southwestern Virginia Medical Society as well as The Medical Society of Virginia and the American Medical Associaton. He is a fellow, American Psychiatric Association; a fellow, Southern Psychiatric Association; and a charter member of the Neuropsychiatric Society of Virginia. He has served as President, Southwestern Virginia Medical Society; Councilor, Medical Society of Virginia, 1947 to 1954, representing the Ninth District; and Chairman, Public Relations Committee, Medical Society of Virginia 1951-1954. His energies have not been confined to his medical associations and he has had a very active part in his community activities. At present he is a member, Radford Kiwanis Club, Past-president and director, Radford Chamber of Commerce, Director, First and Merchants National Bank, Radford; Director, Stevens Supply Corporation, Radford; President, Radford Hotel Corporation, Radford; Director, University of Virginia Medical Alumni Association; member, Commission on Treatment and Rehabilitation of Alcoholics, State of Virginia; and Director, Saint Albans Sanatorium, Radford.

Under the guidance of Dr. King, The Medical Society of Virginia can look forward to a pleasant, peaceful and prosperous year.

M.E.J.

Let's Reminisce!

At the annual meeting in 1871, the president of The Medical Society of Virginia called attention to several sample bottles of "Valentine's Preparation of Meat Juice" which had been sent him for that purpose. Although he had no personal knowledge of its effects, he would be willing to give it a trial. . . .

The Society adopted the following resolution: "Resolved that this Society return its thanks to the officials of the James River and Kanawha Canal Company and to those of the Orange, Alexandria and Manassas, the Chesapeake and Ohio, and the Atlantic, Mississippi and Ohio Railroads for granting return tickets *free of charge* to members who have been in attendance upon the present session of this society."

Society Proceedings . . . .

Southwestern Virginia Medical Society.

Dr. James L. Chitwood, Pulaski, was elected president of this Society at its meeting held in Bristol on September 15th. Other officers are: vice-president, Dr. J. T. Showalter, Christiansburg; secretary-treasurer, Dr. R. H. Jones, Jr., Roanoke (re-elected); and members of the executive council, Drs. J. G. Cox, Hillsville, William Kaufman, Roanoke, William Credle, Bristol, Lester Dunman, Pearisburg, and E. M. Chitwood, Pulaski.

The afternoon program was a panel discussion on Diseases of the Thyroid, with Dr. Kenneth R. Crispell, University of Virginia, as moderator. The panel speakers were Drs. W. F. Amonette, Radford; L. E. Dunman, Pearisburg; B. F. Huntley and J. E. Mitchell, Bristol; and Gordon G. Carmichael, Roanoke. Dr. Nathan E. Womack, University of North Carolina, was speaker at the banquet program, his subject being Progression in Cancer of the Breast.

Newport News-Warwick Medical Society

The first fall meeting of this Society was held on September 13th at the James River Country Club in Warwick, with Dr. J. W. Tankard, president, presiding. Dr. William Likoff of the Bailey Thoracic Clinic in Philadelphia spoke on Medical Aspects of Cardiac Surgery.

Virginia Peninsula Academy of Medicine

The Academy held its initial fall meeting on September 21st at the James River Country Club, Newport News. Dr. Ivan Bennett, Department of Medicine, Johns Hopkins Medical School, spoke on The Management of Infection.

The Fourth District Medical Society

Met in Lawrenceville on September 13th, under the presidency of Dr. W. B. McIlwaine, Petersburg.

The following scientific program was presented: Pericarditis by Dr. Joseph Whittle, Petersburg; Office Diagnosis and Treatment of Glycosuria by Dr. Robert Green, South Hill; Diagnostic Pulmonary Problems by Dr. Edward Ray, Richmond; and Sheehan's Syndrome by Drs. Milton Ende and Mark E. Holt, Petersburg.

Dr. J. G. Graziani, is secretary-treasurer of this Society.

Neuropsychiatric Society of Virginia.

At a meeting of this Society held in Radford in June, the following officers were elected: President, Dr. R. W. Garnett, Jr., Charlottesville; vice-president, Dr. George S. Fultz, Jr., Richmond; and secretary-treasurer, Dr. Thomas F. Coates, Jr., Richmond. Drs. W. D. Buxton, Charlottesville, and Howard R. Masters, Richmond, were named to the Executive Committee.

News . . . .

Calendar of Coming Events

Stuart McGuire Lecture Series—Medical College of Virginia, Richmond, November 7-9.

Southern Medical Association—Houston, Texas, Shamrock Hotel, November 14-17.

American Association of Blood Banks—Palmer House, Chicago, Illinois, November 19-21.

National Society for Crippled Children and Adults—Palmer House, Chicago, Illinois, November 19-21.

American Medical Association Clinical Meeting—Boston, Massachusetts, November 29-December 2.

Virginia Society of Ophthalmology and Otolaryngology—Medical College of Virginia, Richmond, November 29-December 2.

Stuart McGuire Lecture.

The annual Stuart McGuire Lecture Series and a sympoisum on Obstetrics and Gynecology will be held at the Medical College of Virginia, December 7-9. Dr. Richard W. TeLinde, Professor of Gynecology, Johns Hopkins University School of Medicine, will deliver the McGuire Lecture on the 7th, his subject being Endometriosis, Clinical and Experimental.

The symposium will be held on the 8th and 9th, with the following program. The Blood Supply and Lymphatics of the Pelvis by Dr. Erling S. Hegre, Richmond; Obstetric Misconceptions by Dr. John Parks, Washington, D. C.; Complications of Abortion by Dr. Robert H. Baxter, Washington, D. C.; Vaginal Approach to Pelvic Pathology by Dr. Bayard Carter, Durham, N. C.; Urological Complications in Gynecology by Dr. Houston S. Everett, Baltimore; The Abnormal Placenta by Dr. Parks; Management of Ovarian Tumors by Dr. Baxter; Early Cervical Cancer by Dr. TeLinde; The Menopause and Menopausal Syndrome by Dr. Frank R. Lock, Winston-Salem, N. C.; Pruritis Vulvae by Dr. Roy T. Parker, Durham, N. C.; Lesions of the Vulva by Dr. W. N. Thornton, Jr., Charlottesville; Medical and Surgical Complications in Obstetrics by Dr. Lock; Urological Complications of Irradiation by Dr. Everett; Importance of Conservative Management of Obstetrical Problems by Dr. John M. Nokes, Charlottesville; Forceps—Their Use and Application by Dr. Andrew A. Marchetti, Washington, D. C.; and Rupture of the Uterus by Dr. Parker.

All lectures will be in the Baruch Auditorium of the Egyptian Building at the College. There is no charge for the McGuire Lecture, but there will be a charge of $5.00 per day for the lectures on the 8th and 9th, except to members of the faculty of the College, the Medical Department of the University of Virginia, physicians of McGuire VA Hospital, medical students and members of the house staff of any hospital.

Dr. Charles L. Outland,

Director if the Richmond Public Schools Medical Department, has been granted a three-month leave of absence for a United Nations mission to Iraq. He accepted an invitation from the World Health Organization to help set up a government school health program in Iraq and left for this mission on October 5th.

Dr. Walter B. Martin,

Norfolk, was one of the official four-man delegation to the ninth General Assembly of the World Medical Association in Vienna, Austria, in September.

Dr. Walter E. Vermilya,

Clifton Forge, has been elected to the presidency of the Little Theatre Group.

The Virginia Society of Ophthalmology and Otolaryngology

Will hold its annual fall meeting in Richmond at the Baruch Auditorium, Medical College of Virginia, November 29 to December 2nd.

The speakers for the Otolaryngology program, which will be on November 29th and 30th, will be Drs. Victor Alfaro, Lawrence R. Boies, Aram Glorig, Robert J. Huebner, Lyle M. Sellers, Ben Senturia and Henry P. Wagener.

The ophthalmology program will be on December 1st and 2nd, and the speakers will be Drs. Howell W. Brown, James Spencer Dryden, William M. Hart, William Howard, Edward Norton, and Henry P. Wagener.

This Society is sponsoring a convention cruise to Havana and Nassau on May 26 to June 2, 1956. Sailing from and returning to Norfolk, the "Queen of Bermuda" will act as the hotel for the trip. Fare for seven days will be $165.00 and up per person. Reservations may be made with the United States Travel Agency Inc., Washington, D. C. Dr. C. C. Cooley, Medical Arts Building, Norfolk, is publicity chairman for this cruise.

Dr. Howard L. Mitchell, Lexington, is president of this Society and Dr. Maynard P. Smith, Richmond, secretary-treasurer.

Dr. A. McCray Jones,

Recently of Norfolk, is now located at Whaleyville where he is associated with Dr. M. T. Plyler, Jr., in the general practice of medicine.

Dr. Margaret Glendy,

Roanoke, has been named "Woman of the Year" by the Business and Professional Woman's Club. Two years ago the Roanoke Woman's Club gave her the same honor. Her citation pointed out particularly her "exceptional work and success" as the blood program chairman of the Roanoke County Red Cross Chapter and as a leading volunteer at the regional blood center. It also commended her for giving "her time, energy, professional skill and cheerfulness at clinics at the City Health Center."

University to Have Radioactive Cobalt Unit.

Private donations have made it possible for the University of Virginia School of Medicine to pur-

chase a radioactive cobalt unit to be used in the treatment of certain forms of cancer. There is no comparable unit for cancer therapy in Virginia, and in the past patients requiring this kind of radiation have had to be referred to other medical centers outside the state. In addition to its primary use in the treatment of patients, the cobalt unit will provide an extremely useful tool for basic research for all scientists in the University.

Dr. A. I. Dodson,

Richmond, presented three papers before the 6th Annual Meeting of the Puerto Rico Urological Association at San Juan, July 20-23.

He also attended the 20th Annual Congress of the International College of Surgeons, United States and Canadian Sections, in Philadelphia, September 12-15.

Dr. Benjamin W. Rawles, Jr.,

Has been elected president of the Richmond Chapter of the American Red Cross.

Among the new board members are Drs. Gordon D. Hall, Thomas N. P. Johns, and John R. Massie, Jr.

Boston Clinical Session.

The ninth annual Clinical Meeting of the American Medical Association will be held in Boston, November 29 to December 2. An outstanding scientific program covering all phases of medicine—including lectures, round-table discussions, color television and motion picture films—has been lined up for this meeting. Both the scientific and technical exhibits will be held in the Mechanics Building and the House of Delegates will meet at the Statler Hotel.

In the Scientific Exhibit, leading authorities from all over the country will be on hand continuously throughout the four-day meeting to answer questions and discuss problems with the doctors.

It is not too late to make your plans to attend! But, don't delay! An application form for reservations may be found in the advertising pages of the Journal of the American Medical Association.

Dr. John Crawford,

Formerly of Norfolk, has completed a residency in obstetrics and gynecology at the Memorial Hospital, Charlotte, N. C., and is now located at 2022 Atlantic Avenue, Virginia Beach, limiting his practice to the above specialty.

Dr. H. D. Crow

Has been appointed as director of the State Health Department's new medical training section. He will also hold the position of director for the health district of Suffolk and the counties of Southampton, Isle of Wight and Nansemond, with his headquarters at Suffolk.

Dr. Crow has recently been health director for Fredericksburg and the counties of Spotsylvania, Stafford and King George.

Medical News,

The first newspaper exclusively for the medical profession, began publication on September 12th. Ciba Pharmaceutical Products Inc. of Summit, New Jersey, will distribute the eight-page tabloid-size newspaper free to physicians every other week. It contains brief and authoritative news and feature articles on current medical developments here and abroad.

Dr. John Williams Powell,

Richmond, has been named medical director of the Chesapeake and Potomac Telephone Company.

Dr. George Cooper, Jr.,

Professor of radiology at the University of Virginia School of Medicine, gave a refresher course on the collagen diseases as a part of the teaching program at the meeting of the American Roentgen Ray Society in Chicago in September.

Dr. George K. Brooks, Jr.

Richmond, announces the removal of his office for the practice of psychiatry and neurology to 1614 Monument Avenue.

VA Hospital Seminar.

The Fourth Annual Seminar of the Veterans Administration Hospital, Roanoke, will be presented October 10th and 11th. The subject will be The Integration of the Psychiatric Hospital and Community—The Patient, The Hospital and The Community. Our readers are invited to attend this Seminar which will be held in the Auditorium at the Hospital.

Dr. Lewis A. Micou,

Buena Vista, was elected medical advisor of the Virginia Association of Rescue Squads at its annual meeting at Virginia Beach in September.

Dr. Sanger Named Chancellor.

Dr. W. T. Sanger will be given a newly created post of chancellor at the Medical College of Virginia next July 1st. This post was created due to his compulsory retirement from the presidency at the age of 70. Dr. Sanger will assist in planning further

development of the college and will act in an advisory capacity.

Dr. R. Blackwell Smith, Jr., dean of the School of Pharmacy, will become president of the College. He has been serving as assistant president since last March.

College to Have Skin Bank.

Plans to have a "skin bank" at the Medical College Hospital have been announced by Dr. B. W. Haynes, Jr., director of surgical research and in charge of the burns units. The bank would contain strips of skin from either live or deceased donors and will enable victims of severe burns to have skin transplanted immediately as needed. The skin is stored in a special solution, refrigerated, and can be kept as long as three weeks. Skin taken from another person are temporary coverings for burned areas and form a healthy covering which prevents loss of proteins and infection while the patient heals.

Dr. James H. Roberts,

Roanoke, has been awarded a certificate of merit and pin by the National Medical Association in recognition of the forty or more years of valuable service he has rendered to the citizens of his state, the nation and the Association.

The Virginia Trudeau Society

Will hold its annual meeting at the Richmond Academy of Medicine at 2 p.m. on Friday, November 18. Dr. E. C. Drash, Professor of Surgery at the University of Virginia Hospital, and currently president of the VTS, will preside.

The Virginia Trudeau Society is the medical section of the Virginia Tuberculosis Association and is composed of member-physicians interested in chest diseases, with emphasis on tuberculosis.

A featured speaker on the scientific program will be Dr. William B. Tucker, Chief of Tuberculosis Services, VA Hospital, Durham, N. C., who will discuss "Medical Treatment of Tuberculosis."

All interested physicians are cordially invited to attend.

For Sale.

Surburban properties, homes and timberlands, located in the vicinity of Richmond and Hopewell. Sound investment opportunities. Call or write: W. L. Broaddus, phone 844, P. O. Box 479, Hopewell, Va. *(Adv.)*

For Rent.

Doctor's office. Three doors west of the Lee Medical Building, Richmond. Will remodel to suit doctor. Write "Office", care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. *(Adv.)*

Obituaries . . . .

Dr. Philip St. Leger Moncure,

Prominent Norfolk surgeon, died September 24th at "Ellerslie", his ancestral home in Caroline County, where he had been living since his retirement several years ago. He was eighty-eight years of age and graduated from the Medical College of Virginia in 1897. Dr. Moncure practiced fifty-three years in Norfolk and was member of the staff and board of directors of the DePaul Hospital. He was a past president of the Norfolk County Medical Society, a charter member of the Seaboard Medical Association and a member of the American College of Surgeons. Dr. Moncure was also a member of the State Board of Medical Examiners for a number of years. He was a thirty-third degree Mason and had been almoner and chairman of the Scottish Rite Brothers.

Dr. Moncure had been a very active member of The Medical Society of Virginia since 1900. He served as its President in 1935-6. He was a member of the Council and served on numerous committees. As a member of the House of Delegates, he always took part in any discussion and was a fighter against any action that might harm the Society or its members. Everyone knew and loved Dr. Moncure and he could always be counted on for any job—no matter how small or how big.

A brother and two sisters survive him.

Dr. Charles Clay Carr,

Pennington Gap, died September 29th, at the age of sixty-nine. He was a graduate in medicine of the University of Tennessee in 1915. Dr. Carr was a past president of the Pennington Gap Lions Club, a past commander of the American Legion, and a member of the Masons. He was a past president of the Lee County Medical Society and a member of The Medical Society of Virginia. His wife survives him.

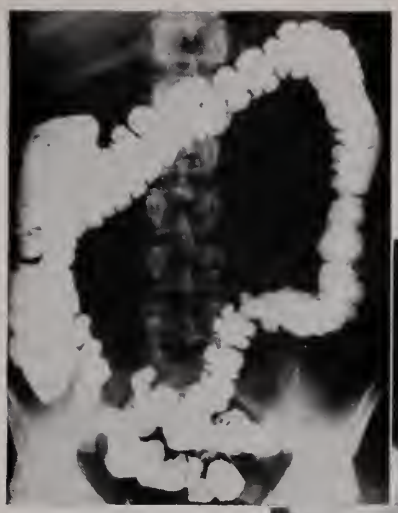
Dr. John Willis Abbitt,

Prominent physician of Portsmouth, died of a heart attack September 26th. Apparently in the best of health, he went to get a drink of water and fell dead. Dr. Abbitt was sixty-nine years of age and received his medical degree from the University of Maryland in 1910. After serving his internship, he located in Portsmouth where he has practiced ever since. He was a past president of the medical staff of the King's Daughters and a former member of the board of directors. At the time of his death, Dr. Abbitt was chief of surgery and chief of the staff of the Maryview Hospital. He was one of 10 physicians who organized the former Parrish Memorial Hospital. Dr. Abbitt has limited his practice to obstetrics and surgery and in one year he delivered the second largest number of babies in Virginia. He was a past president of the Portsmouth Kiwanis Club and a member of many civic and fraternal organizations. Dr. Abbitt has been a member of The Medical Society of Virginia for twenty-seven years.

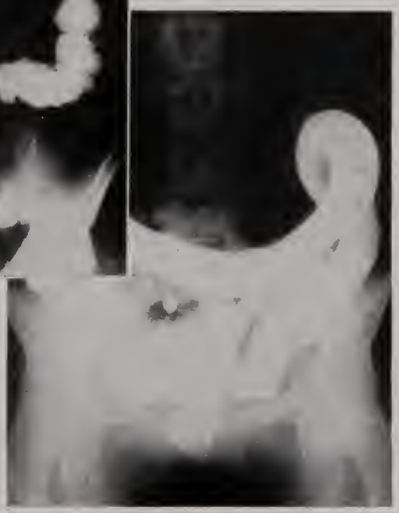
His wife and a daughter survive him.

Dr. Carl M. Peterson,

Secretary of the Council on Industrial Health of the American Medical Association, was fatally injured on September 26th when a private plane in which he was riding crashed and burned near Asheville, N. C. The two members of the crew were killed instantly but Dr. Peterson was thrown from the plane and it was felt he would pull through. However, he died on the 27th.



Normal Colon



Ulcerative Colitis



Atonic Colon

Smoothage in Correction of Colon Stasis

To initiate the normal defecation reflex, the "smoothage" and bulk of Metamucil provide the needed gentle rectal distention.

Once the habit of constipation has been established, due to any of a large number of causes, it becomes a major problem. Self-medication with irritant or chemical laxatives, or repeated enemas, usually causes a decreased, sluggish defecation reflex and may result in its complete loss.

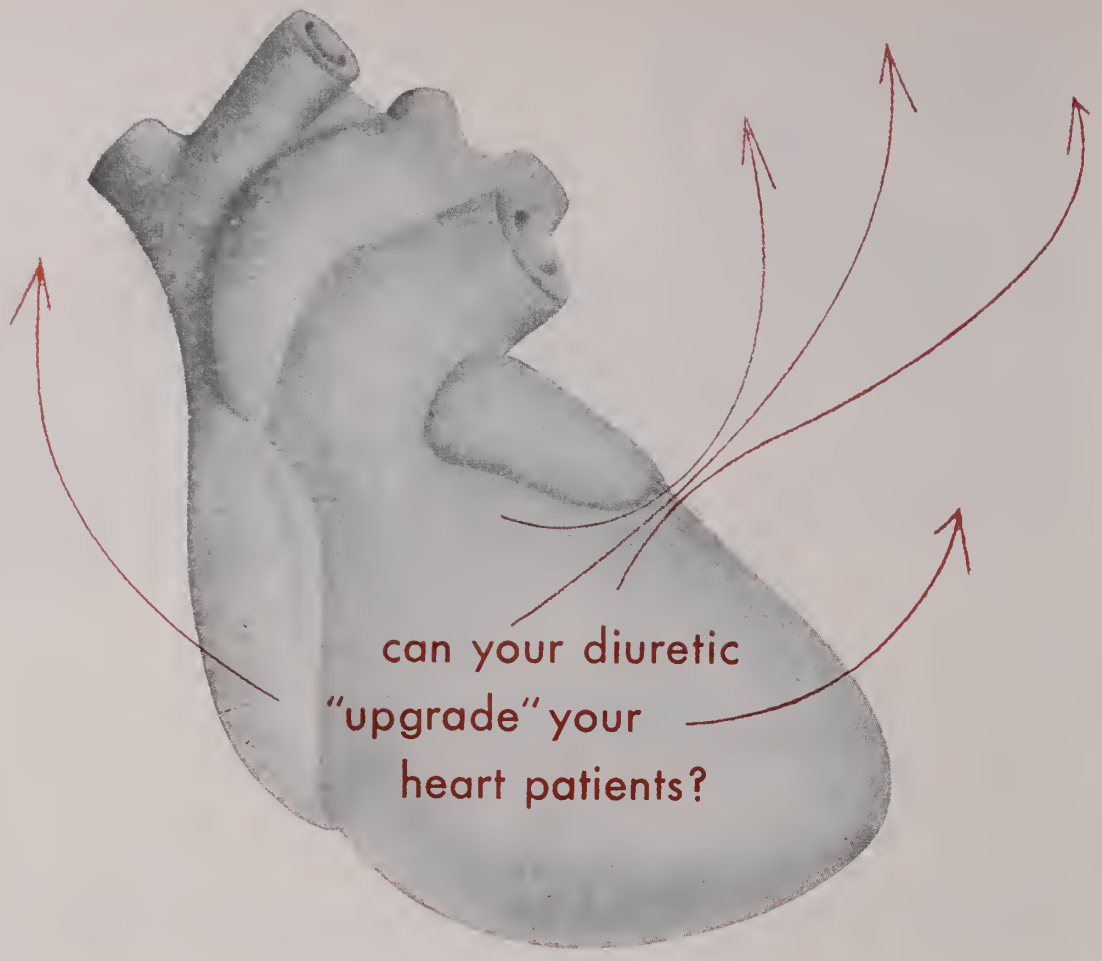
Rectal distention is a vital factor in initiating the normal defecation reflex, and sufficient bulk is thus of obvious importance in restoring this reflex. Metamucil provides this bulk in the form of a smooth, nonirritating, soft, hydrophilic colloid which gently distends the rectum and initiates the desire to evacuate. Metamucil demands extra fluid, imparting even greater smoothage to the intestinal contents.

It is indicated in chronic constipation of various types—including distal colon stasis of the "irritable colon" syndrome, the atonic colon following abdominal operations, repressions of defecation after anorectal surgery and in special conditions such as the management of a permanent ileostomy. Metamucil is the highly refined mucilloid of Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

The average adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice, followed by an additional glass of fluid if indicated.

Metamucil is supplied in containers of 4, 8 and 16 ounces. G. D. Searle & Co., Research in the Service of Medicine.

SEARLE



know your diuretic

fewer restrictions of activity are the benefit of prolonged use of those diuretics effective over the entire range of cardiac failure. The organomercurials—parenteral and oral—improve the classification and prognosis of your decompensated patients. Diuretics of value only in milder grades of failure, or which must be given intermittently because of refractoriness or side effects, are incapable of "upgrading" the cardiac patient.

TABLET
NEOHYDRIN®
BRAND OF CHLORMERODRIN

(18.3 MG. OF 3-CHLOROMERCURI-2-METHOXY-PROPYLUREA IN EACH TABLET)

for "...a new picture of the patient in congestive heart failure."*
replaces injections in 80% to 90% of patients
*Leff, W., and Nussbaum, H. E.: J. M. Soc. New Jersey 50:149, 1953.

a standard for initial control of severe failure

MERCUHYDRIN® SODIUM
BRAND OF MERALLURIDE INJECTION

Leadership in diuretic research
Lakeside LABORATORIES, INC., MILWAUKEE 1, WISCONSIN

88055

The organisms commonly involved in

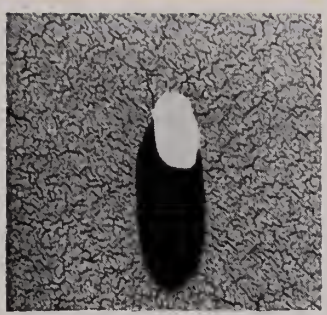
Pyelitis



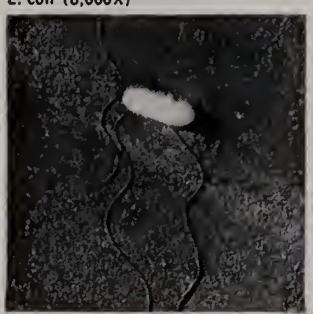
E. coli (8,000X)



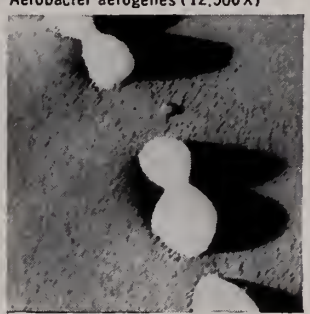
Aerobacter aerogenes (12,500X)



Salmonella paratyphi A (8,000X)



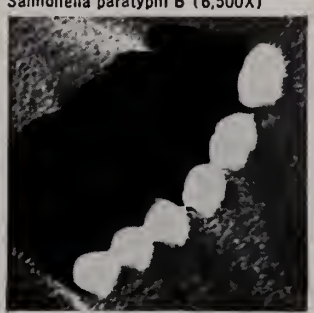
Salmonella paratyphi B (6,500X)



Strep. pyogenes (8,500X)



Strep. faecalis (10,000X)



Strep. viridans (9,000X)



Staph. aureus (9,000X)

Upjohn

ELECTRON MICROGRAPHS

***All* of them are included in the more than 30 organisms susceptible to broad-spectrum**

PANMYCIN* HYDROCHLORIDE

100 mg. and 250 mg. capsules • 125 mg. and 250 mg./tsp. oral suspension (PANMYCIN Readimixed)
100 mg./cc. drops • 100 mg./2 cc. injection, intramuscular
100 mg., 250 mg., and 500 mg. vials, intravenous

*TRADEMARK, REG. U. S. PAT. OFF.—THE UPJOHN BRAND OF TETRACYCLINE

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

Medical College of Virginia

HOSPITAL DIVISION

RICHMOND, VIRGINIA

A health center using the latest methods of diagnosis and treatment of disease.

MEDICAL COLLEGE OF VIRGINIA HOSPITAL
OUT-PATIENT DEPARTMENT
SAINT PHILIP HOSPITAL
DOOLEY HOSPITAL

The patient's welfare is our primary interest.

C. P. CARDWELL, JR., *Director*

SAINT ALBANS

A PRIVATE PSYCHIATRIC HOSPITAL

RADFORD, VIRGINIA



STAFF

James P. King, M. D., Director

James K. Morrow, M. D. Thomas E. Painter, M. D. Daniel D. Chiles, M. D.

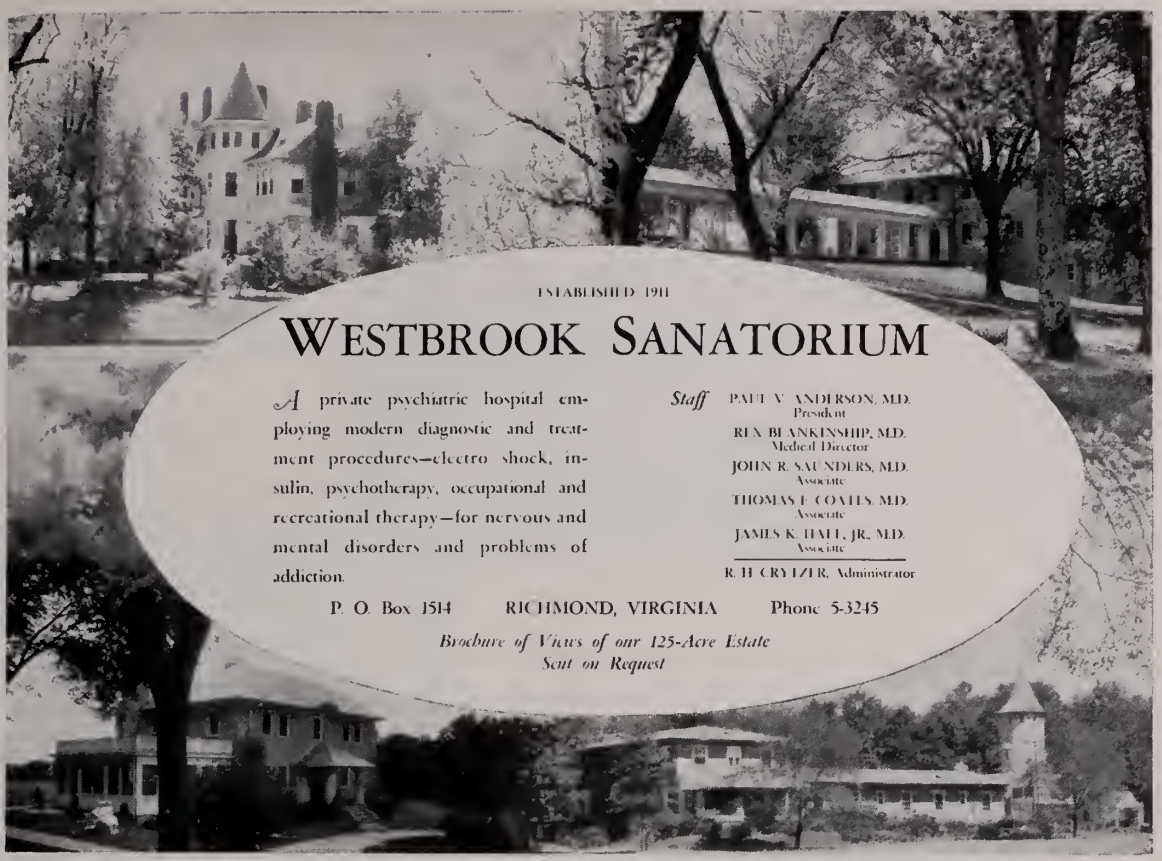
James L. Chitwood, M. D., Medical Consultant

Affiliated Clinic Offering Psychiatric and Psychological Evaluation and Therapy:

BLUEFIELD MENTAL HEALTH CENTER

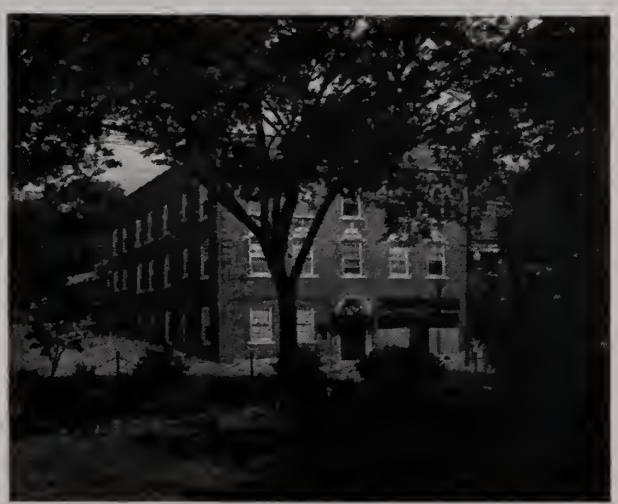
1400 Bland Street **Bluefield, W. Va.**

David M. Wayne, M. D., Director



Gill Memorial Eye, Ear and Throat Hospital, Inc.

Roanoke, Virginia



STAFF

ELBYRNE G. GILL, M. D.
HOUSTON L. BELL, M. D.
THOMAS QUILTY, M. D.
DORIS L. JANES, B. S., O. D.
(Orthoptics and Contact Glasses)
S. H. HOLLAND, M. D.
ROBERT B. JONES, JR., M. D.

A Modern, Fireproof Hospital, Specially Designed and Equipped for the Medical and Surgical Care of Ophthalmology, Otolaryngology, Facio-Maxillary Surgery, Bronchoscopy and Esophagoscopy.

Complete Laboratory and X-Ray Equipment.

Physicians and Graduate Nurses in Constant Attendance.

The Hospital offers a residentship of three years to a graduate of an approved medical school, who has had an internship of at least one year in an approved hospital.

For further information, address

BUSINESS MANAGER, BOX 1789, ROANOKE, VIRGINIA



Part View of Park Grounds

TERRACE HILL was specifically built for a Nursing Home. Superb 24 hours daily care. Under supervision of a Registered Nurse and Resident Externe. Quiet atmosphere. Trained Dietitian. Accommodates 50 guests. Private and semi-private rooms with lavatories. Rates $45.00 to $75.00 weekly for room, board and general nursing care. Your inspection invited.

Professional Nursing Care

TERRACE HILL

Nursing Home, Inc.

"Understanding Care"

2112 MONTEIRO AVE., RICHMOND, VA.



Comfortable Lounges

Around the Clock

NURSING CARE

•

Convalescents
Chronic Cases
Elderly People



Wide, Long Hallways

Each Guest Under Care of Own Doctor.

Professional care supervised by trained nurse. Doctors orders carefully followed. No parking problem. Regularly inspected by City Health Department. For additional information

Write or Call Superintendent

TERRACE HILL NURSING HOME, Dial 3-3993

THE
KEELEY INSTITUTE
447 W. Washington St.
GREENSBORO,
NORTH CAROLINA

Out-Patient Clinic
And Hospital For Rehabilitation Of
The ALCOHOLIC

A. F. Fortune, MD: Medical Director
Ben F. Fortune, MD: Associate Medical Director
R. H. Dovenmuehle, MD: Consultant in Psychiatry

In-patients are accepted in state of acute alcoholism. No waiting period required.

Registered by American Medical Association

The . . . Thompson Homestead School

FOR EXCEPTIONAL CHILDREN

Year round private home and school for infants, children and adults on pleasant 250 acre farm near Charlottesville.

Write for booklet.

MRS. J. BASCOM THOMPSON, *Principal*

FREE UNION **VIRGINIA**

The State Board of Medical Examiners of Virginia

The next meeting of the Board will be held at Richmond Hotel, Richmond, Virginia December 6, 1955 and the examinations will be held at the same hotel December 7, 8 and 9. November 21, 1955 is the deadline for receipt of applications for the examination and documents and papers to be discussed and acted upon by the Board. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

A Modern Hospital for the Treatment of Alcoholism Exclusively

- A private hospital offering scientific, institutional, medical, psychological, reflex, reduction and other methods for the rehabilitation of consent patients suffering from alcoholism.

- All equipment modern with facilities to take care of 50 patients both male and female.

- Under the direction of a competent licensed M. D. with five consultant physicians subject to call. Registered Nurses in charge 24 hours daily.



Approved and licensed by the Virginia State Hospital Board. Atop beautiful Mt. Regis, five miles West of Roanoke, on Highway 11, in the quiet serene mountains of Virginia, conducive to rest, comfort and recuperation. Doctors inspection invited. For information phone or write.

WHITE CROSS HOSPITAL

Five Miles West of Roanoke on Route No. 11.
Salem, Virginia — Phone Salem 287

WHITE CROSS HOSPITAL

Copyright 1948. H. N. Alford, Atlanta, Ga.

RIVERSIDE HOSPITAL, Newport News, Va.



A General Hospital (265 beds) with Departments in Medicine, Surgery, Obstetrics, Pathology, Radiology, Pediatrics and Nursing. The Hospital is accredited by the Council on Medical Education of the American Medical Association for training first year interns, residencies in the surgical specialties for one and two years, general practices two years full approval, internal medicine, and obstetrics and gynecology, and the School of Nursing is accredited by the Virginia State Board of Nurse Examiners.

DAVID E. WATSON,
Administrator

MISS ROSE M. DEWEVER, R.N.,
Director, School of Nursing

McGUIRE CLINIC
ST. LUKE'S HOSPITAL

RICHMOND. VIRGINIA



General Medicine
HUNTER H. McGUIRE, M.D.
MARGARET NOLTING, M.D.
JOHN P. LYNCH, M.D.
WM. H. HARRIS, JR., M.D.
JOHN B. CATLETT, M.D.
ROBERT W. BEDINGER, M.D.

Orthopedic Surgery
JAMES T. TUCKER, M.D.
BEVERLEY B. CLARY, M.D.
EARNEST B. CARPENTER, M.D.
JAMES B. DALTON, JR., M.D.

Ophthalmology, Otolaryngology
FRANCIS H. LEE, M.D.

General Surgery
WEBSTER P. BARNES, M.D.
JOHN H. REED, JR., M.D.
JOHN ROBERT MASSIE, JR., M.D.
JOSEPH W. COXE III, M.D.

Dental Surgery
JOHN BELL WILLIAMS, D.D.S.

Urology
AUSTIN I. DODSON, M.D.
CHAS. M. NELSON, M.D.
AUSTIN I. DODSON, JR., M.D.

Pediatrics
HUBERT T. DOUGAN, M.D.

Obstetrics
W. HUGHES EVANS, M.D.
W. H. COX, M.D.
JAMES M. WHITFIELD, M.D.

Bronchoscopy
GEORGE AUSTIN WELCHONS, M.D.

Roentgenology
JESSE N. CLORE, JR., M.D.
STUART J. EISENBERG, M.D.

Pathology
J. H. SCHERER, M.D.

Treasurer: RICHARD J. JONES, BS., C.P.A.

RIVERSIDE CONVALESCENT HOME

Sophia & Fauquier Sts. **Fredericksburg, Virginia**



For convalescent, aged, chronically ill, and retired persons. Provides healthful rest, excellent nursing care in cheerful, comfortable surroundings. Air-conditioned, fire-safe building. Accommodations for eighty. Medical Supervision. Inspection Invited. Write, or telephone Essex 3-3434.

Rates:

$35.00 to $75.00 per week

RICHMOND EYE HOSPITAL
RICHMOND EAR, NOSE AND THROAT HOSPITAL

(COMBINED)

RICHMOND, VIRGINIA



A new non-profit Community Hospital specially constructed for the treatment of Eye, Ear, Nose and Throat Diseases, including Laryngeal Surgery, Bronchoscopy and Plastic Surgery of the Nose.

Professional care offered a limited number of charity patients.

ADDRESS: **JULIA WAGNER WATERS, R.N.,** ***Administrator*** **408 North 12th Street**

Third Decade of Nursing

MODERN IN EQUIPMENT *OLD IN TRADITION*

MRS. PLYLER'S NURSING HOME

KATE E. PLYLER (1876-1947) MARY INGRAM CLARK

CONVALESCENT — CHRONIC — AGED

- Equipped for oxygen and transfusions
- 30 special & general nurses
- 24-hour nursing care
- Centrally located
- 50-bed capacity
- Dietician
- Rates from $42.00 to $70.00 per week for room, board and general nursing care.





For further information write or call MRS. GENE CLARK REGIRER, Supt.

1613-15-17 Grove Avenue—Richmond, Virginia—Telephone 84-3221

Appalachian Hall • Asheville, North Carolina

ESTABLISHED 1916



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D. MARK A. GRIFFIN, SR., M.D.

ROBERT A. GRIFFIN, JR., M.D. MARK A. GRIFFIN, JR., M.D.

For rates and further information write APPALACHIAN HALL, ASHEVILLE, N. C.

ST. ELIZABETH'S HOSPITAL

RICHMOND 20, VIRGINIA

STAFF

Guy W. Horsley, M.D.	General Surgery and Gynecology
D. Coleman Booker, M.D.	General Surgery and Gynecology
Austin I. Dodson, M.D.	Urology
Austin I. Dodson, Jr., M.D.	Urology
J. Edward Hill, M.D.	Urology
Douglas G. Chapman, M.D.	Internal Medicine
Eimer S. Robertson, M.D.	Internal Medicine
T. E. Stanley, M.D.	Internal Medicine
Fred M. Hodges, M.D.	Roentgenology
L. O. Snead, M.D.	Roentgenology
Hunter B. Frischkorn, Jr., M.D.	Roentgenology
Helen Lorraine	Medical Illustration

ADMINISTRATION

William Scott	Business Manager

SCHOOL OF NURSING

The School of Nursing is affiliated with The Johns Hopkins Hospital School of Nursing for a three months' course each in Pediatrics and Obstetrics, and with the Tucker's Hospital in Richmond for a 12 weeks course in Psychiatry.

Address: Superintendent of Nurses

1950 Cortone® | **1952 Hydrocortone®**

1954 'Alflorone' | **1955 'Hydeltra'**

DELTRA®

tablets

(Prednisone, Merck)

5 mg. - 2.5 mg. - 1 mg. (scored)

the delta-1 analogue of cortisone

Indications:

Rheumatoid arthritis

Bronchial asthma

Inflammatory skin conditions

SHARP & DOHME

Philadelphia 1, Pa.
Division of Merck & Co., Inc.

TUCKER HOSPITAL Inc.

212 West Franklin Street,

Richmond, Virginia

A private hospital accepting for diagnosis and treatment organic neurological conditions, selected psychiatric and alcoholic cases, metabolic disturbances of an endocrine nature, individuals who are having difficulty with their personality adjustments, and children with behavior problems. Patients with general medical disorders admitted for treatment under our staff of visiting physicians.

Under the Professional Charge of

DR. HOWARD R. MASTERS, DR. JAMES ASA SHIELD
AND ASSOCIATES

STUART CIRCLE HOSPITAL

413-21 STUART CIRCLE
RICHMOND, VIRGINIA

Medicine:
MANFRED CALL, III, M.D.
M. MORRIS PINCKNEY, M.D.
ALEXANDER G. BROWN, III, M.D.
JOHN D. CALL, M.D.
WYNDHAM B. BLANTON, JR., M.D.

Obstetrics and Gynecology:
WM. DURWOOD SUGGS, M.D.
SPOTSWOOD ROBINS, M.D.
EDWIN B. PARKINSON, M.D.

Orthopedics:
BEVERLEY B. CLARY, M.D.

Pediatrics:
CHARLES P. MANGUM, M.D.
EDWARD G. DAVIS, JR., M.D.

Ophthalmology, Otolaryngology:
W. L. MASON, M.D.

Anesthesiology
WILLIAM B. MONCURE, M.D.
HETH OWEN, JR., M.D.

Surgery:
A. STEPHENS GRAHAM, M.D.
CHARLES R. ROBINS, JR., M.D.
CARRINGTON WILLIAMS, M.D.
RICHARD A. MICHAUX, M.D.
CARRINGTON WILLIAMS, JR., M.D.

Urological Surgery:
FRANK POLE, M.D.

Oral Surgery:
GUY R. HARRISON, D.D.S.

Plastic Surgery:
HUNTER S. JACKSON, M.D.

Roentgenology and Radiology:
FRED M. HODGES, M.D.
L. O. SNEAD, M.D.
HUNTER B. FRISCHKORN, JR., M.D.
WILLIAM C. BARR, M.D.

Physiotherapy:
MISS ETHELEEN DALTON

Director:
CHARLES C. HOUGH

THE NEW YORK POLYCLINIC
MEDICAL SCHOOL AND HOSPITAL

(Organized 1881)

(The Pioneer Post-Graduate Medical Institute in America)

OBSTETRICS and GYNECOLOGY

A two months full time course. In Obstetrics: lectures, prenatal clinics; attending normal and operative deliveries; detailed instruction in operative obstetrics (manikin). X-ray diagnosis in obstetrics and gynecology. Care of the newborn. In Gynecology: lectures; touch clinics; witnessing operations; examination of patients pre-operatively; follow-up in wards post-operatively. Obstetrical and gynecological pathology. Culdoscopy. Studies in Sterility. Anesthesiology. Attendance at conferences in obstetrics and gynecology. Operative gynecology on the cadaver.

EYE, EAR, NOSE and THROAT

A nine months combined full time refresher course consisting of attendance at clinics, witnessing operations, lectures, demonstration of cases and cadaver demonstrations; operative eye, ear, nose and throat on the cadaver; clinical and cadaver demonstrations in bronchoscopy, laryngeal surgery and surgery for facial palsy; refraction; radiology; pathology, bacteriology and embryology; physiology; neuro-anatomy; anesthesia; physical medicine; allergy; examination of patients pre-operatively and follow-up post-operatively in the wards and clinics.

UROLOGY

A combined full-time course in Urology, covering an academic year (8 months). It comprises instruction in pharmacology; physiology; embryology; biochemistry; bacteriology and pathology; practical work in surgical anatomy and urological operative procedures on the cadaver; regional and general anesthesia (cadaver); office gynecology; proctological diagnosis; the use of the ophthalmoscope; physical diagnosis; roentgenological interpretation; electrocardiographic interpretation; dermatology and syphilology; neurology; physical medicine; continuous instruction in cystoendoscopic diagnosis and operative instrumental manipulation; operative surgical clinics; demonstrations in the operative instrumental management of bladder tumors and other vesical lesions as well as endoscopic prostatic resection; attendance at departmental and general conferences.

PROCTOLOGY AND GASTROENTEROLOGY

A combined course comprising attendance at clinics and lectures; instruction in examination, diagnosis and treatment: pathology, radiology, anatomy, operative proctology on the cadaver, anesthesiology, witnessing of operations, examination of patients preoperatively and postoperatively in the wards and clinics; attendance at departmental and general conferences.

For Information concerning these and other Courses please Address:

THE DEAN, 345 West 50th St., New York 19, N. Y.

1950 Cortone® | 1952 Hydrocortone®

1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets

(PREDNISOLONE, MERCK)

2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

Indications: *Rheumatoid arthritis*

Bronchial asthma

Inflammatory skin conditions

SHARP & DOHME

Philadelphia 1, Pa.

Division of Merck & Co., Inc.

The organisms commonly involved in

Pneumonia



D. pneumoniae (10,000X)



K. pneumoniae (6,500X)



Strep. pyogenes (8,500X)



Staph. aureus (9,000X)

Upjohn

ELECTRON MICROGRAPHS

***All* of them are included in the more than 30 organisms susceptible to broad-spectrum**

PANMYCIN* HYDROCHLORIDE

100 mg. and 250 mg. capsules • 125 mg. and 250 mg./tsp. oral suspension (PANMYCIN Readimixed)
100 mg./cc. drops • 100 mg./2 cc. injection, intramuscular
100 mg., 250 mg., and 500 mg. vials, intravenous

*TRADEMARK, REG. U. S. PAT. OFF.—THE UPJOHN BRAND OF TETRACYCLINE

In a Filter Cigarette...
it's the Filter You Depend on



The VICEROY filter tip contains 20,000 tiny filter traps, made through the solubilization of pure natural material. This is twice as many of these filter traps as any other brand.

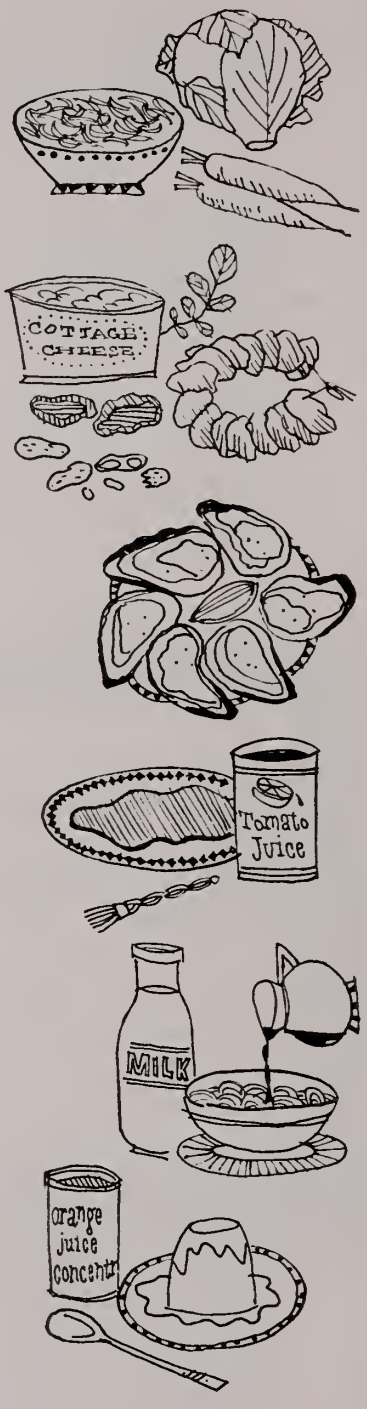
We believe this simple fact is one of the principal reasons why so many doctors smoke *and* recommend VICEROY—the cigarette you can *really* depend on!



King-Size Filter Tip **VICEROY**

World's Most Popular Filter Tip Cigarette
Only a Penny or Two More
Than Cigarettes Without Filters

High-Vitamin, High-Mineral Diet the natural way!



Foods high in vitamins and minerals not only give your patient good nutrition naturally, but also may supply vital elements still unknown. These "diet do's" may tempt him to rely more on food than supplements for his vital nutrients.

These foods are best served raw—

Shredded new cabbage and carrot slaw goes nicely with any meal, and combines the benefits of vitamins A and C with some calcium.

Dried apricots and figs stuffed with cottage cheese and peanuts sit prettily in a bed of watercress, and provide calcium, iron, vitamins A, B_2, niacin, and C.

Oysters are exceptionally rich in both iron and calcium and carry a generous amount of vitamins A and D as well.

These good foods can be made even better—

Beef liver ranks high in iron, vitamins A, and B-complex. Brushed with tomato juice an hour before cooking, it turns tender and tasty.

Oatmeal, rich in iron, gets even more and a plus in calcium and vitamin B_6 when served with molasses and milk.

Custard contains calcium and vitamins A, B_1, and B_2. A topping of orange juice concentrate gives your patient a bonus in vitamin C.

Although these "do's" list only the more familiar vitamins and minerals, the trace elements and other micronutrients are no less important. And a varied diet will help your patient get the vital body regulators he needs.

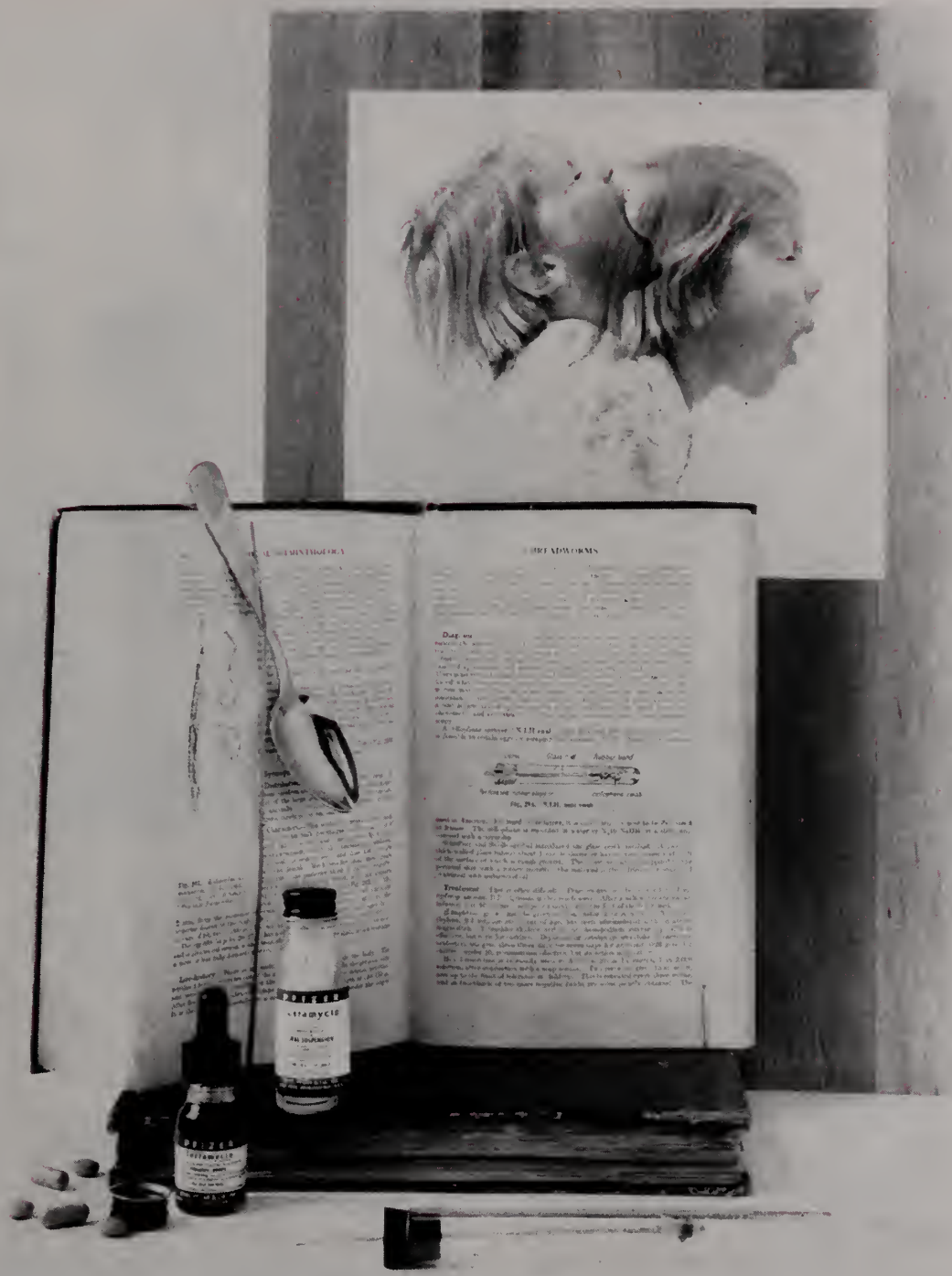
United States Brewers Foundation

Beer—America's Beverage of Moderation

An 8-oz. glass of beer contains 10 mg. calcium, 50 mg. phosphorus, 1/8th minimum daily requirement of niacin, and smaller amounts of other B-complex vitamins. (Average of American beers)

If you'd like reprints of 12 different diets, please write United Stotes Brewers Foundation, 535 Fifth Avenue, New York 17, N.Y.

From virus to vermicularis



Terramycin®* has proved effective against an amazing variety of pathogens—ranging from sub-microscopic viruses to large helminthic parasites; findings supported by scientific reports by thousands of physicians on millions of cases. Supplied in convenient and palatable oral dosage forms as well as rapidly effective parenteral, topical and ophthalmic preparations.

*BRAND OF OXYTETRACYCLINE

PFIZER LABORATORIES, Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.

Pfizer

One of a Series of Newspaper Ads Directed to Your Patients and Our Customers....

PEOPLES DRUG STORES INC

THANKS TO HIS DOCTOR

vacation from business pressure—
relief from
high blood pressure



Life's pace is so rapid, that people are subject more than ever to hypertension and nerve ailments. Even if your body *hasn't* kept up with today's fast pace, your doctor *has*. See him at least once a year for a complete check-up, and follow his program of rest, relaxation, freedom from anxiety, return to normal weight.

If your doctor's treatment includes a prescription, bring it to Peoples for accurate, speedy service. And, of course, your prescription is priced with uniform economy at Peoples Service Drug Store.



PEOPLES *Certified* PRESCRIPTIONS

AT ALL PEOPLES SERVICE DRUG STORES

...just what the doctor ordered

© 1955 PEOPLES DRUG STORES, INC.



BAKER'S
MODIFIED MILK

made from grade A milk*
"The first in infant feeding"

This statement is your assurance of the use of high quality, clean milk. Make a habit of looking for it on the label of the milk products which you prescribe for infant feeding.

The quality of the ingredients is reflected in the quality of the final product!

FEEDING DIRECTIONS		
	Baker's	Boiled Water
First 5 days of life	1 part	2 parts
Second 5 days	1 part	1½ parts
After 10th day	1 part	1 part

*U. S. Public Health Service Milk Code

THE BAKER LABORATORIES, INC.

Milk Products Exclusively for the Medical Profession

MAIN OFFICE: CLEVELAND 3, OHIO PLANT: EAST TROY, WISCONSIN



AC

(you probably know every answer!)

Q. Which is today's most widely prescribed broad-spectrum antibiotic?

A. ACHROMYCIN — it's first by many thousands of prescriptions.

Q. What are some of the advantages of ACHROMYCIN?

A. Wide spectrum of effectiveness.
Rapid diffusion and penetration.
Negligible side effects.

Q. Exactly how broad is the spectrum of ACHROMYCIN?

A. It has proved effective against a wide variety of infections, caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa.

Q. In what way are ACHROMYCIN Capsules advantageous?

A. For rapid and complete absorption they are dry-filled, sealed capsules (a Lederle exclusive!) No oils, no paste...tamperproof.

Q. Who makes ACHROMYCIN?

A. It is produced — every gram — under rigid quality control in Lederle's own laboratories and is available only under the Lederle label.

HROMYCIN*

Hydrochloride
Tetracycline HCl Lederle

Lederle

LEDERLE LABORATORIES DIVISION AMERICAN Cyanamid COMPANY PEARL RIVER, NEW YORK

*REG. U.S. PAT. OFF.

Calm, Relaxed AND *Awake*

MEBARAL®

BRAND OF MEPHOBARBITAL

for the hyperexcitability so often found in

hypertension
hyperthyroidism
convulsive disorders
difficult menopause
psychoneurosis
hyperhidrosis

Mebaral's soothing sedative effect is obtained without significantly clouding the patient's mental faculties.

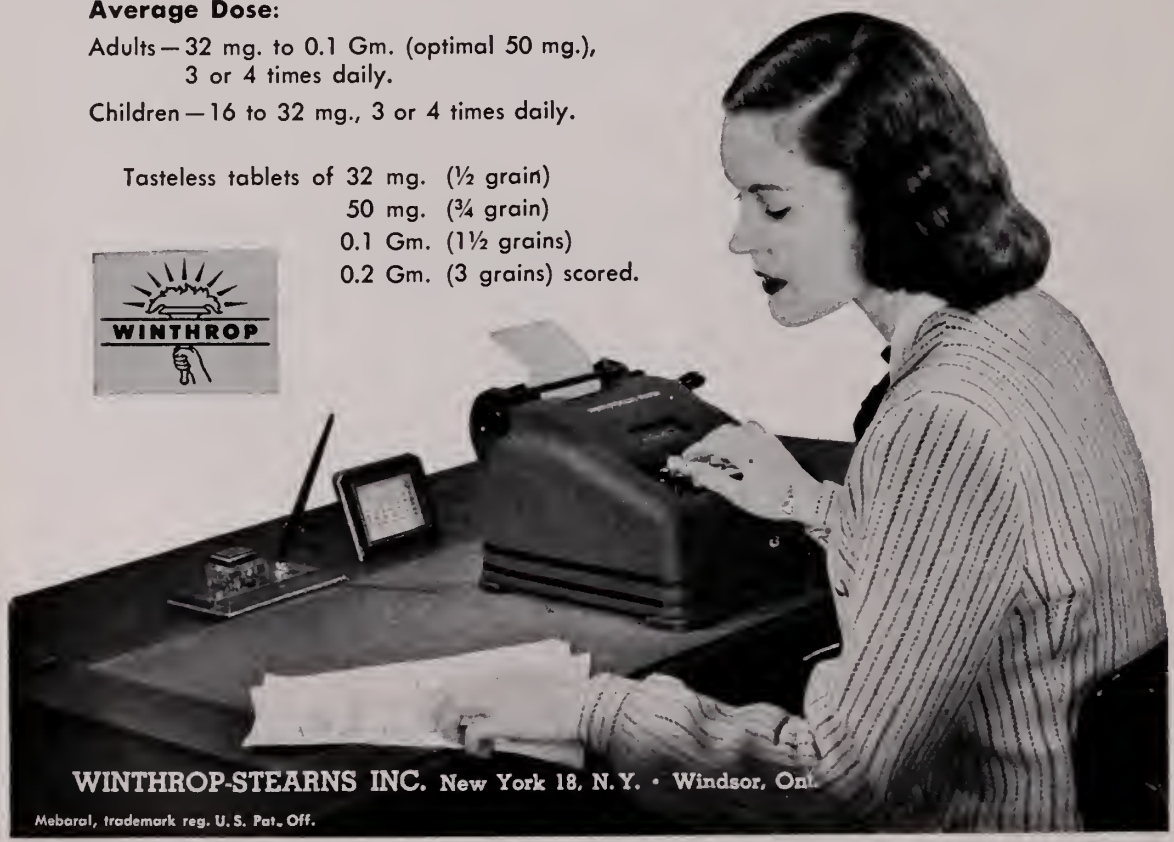
Average Dose:

Adults—32 mg. to 0.1 Gm. (optimal 50 mg.), 3 or 4 times daily.

Children—16 to 32 mg., 3 or 4 times daily.

Tasteless tablets of 32 mg. (½ grain)
50 mg. (¾ grain)
0.1 Gm. (1½ grains)
0.2 Gm. (3 grains) scored.

WINTHROP



WINTHROP-STEARNS INC. New York 18, N.Y. • Windsor, Ont.

Mebaral, trademark reg. U.S. Pat. Off.

There's A Sparkle to A Glass of Wine

—That puts an answering sparkle into the eyes and appetites of your geriatric, post-surgical, sick and convalescent patients.

A glass of Port, Sherry, Burgundy, Rhine Wine—whatever taste pleases your patient—can do wonders to add zest and bouquet to meals, even when appetite is at low ebb.

Aside from these psychobiologic effects of wine, however, there are physiologic effects of wine on the human host, which can also be significant in clinical medicine. A definitive literature on these actions is rapidly accumulating.

The Wine Advisory Board has recently accumulated in a concise brochure the highlights of recent work in this field.

Herein are reported the latest findings on the value of wine as a stimulant to flagging appetite, as an aid to digestion, as a vasodilator, as a daytime and night-time sedative.

We will be glad to send you a copy of "Uses of Wine in Medical Practice" (at no expense, of course). Just write to: Wine Advisory Board, 717 Market Street, San Francisco 3, California.

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets

(PREDNISOLONE, MERCK) 2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

SHARP & DOHME

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

"Premarin" relieves menopausal symptoms with virtually no side effects, and imparts a highly gratifying "sense of well-being."

"Premarin" ® —Conjugated Estrogens (equine)

5511



KARO SYRUP **BELONGS IN THIS PICTURE!**

...a carbohydrate of choice
in milk modification for 3 generations

OPTIMUM caloric balance—60% of caloric intake, gradually achieved in easily assimilable carbohydrates —is assured with Karo. Milk alone provides 28%, or less than half the required carbohydrate intake.

A MISCIBLE liquid, Karo is quickly dissolved, easy to use, readily available and inexpensive.

A BALANCED mixture of dextrins, maltose and dextrose, Karo is well tolerated, easily digested, gradually absorbed at spaced intervals and completely utilized.

PRECLUDES fermentation and irritation. Produces no reactions, hypoallergenic. Bacteria-free Karo is safe for feeding prematures, newborns, and infants—well and sick.

LIGHT and dark Karo are interchangeable in formulas; both yield 60 calories per tablespoon.

CORN PRODUCTS REFINING COMPANY • 17 Battery Place, New York 4, N. Y.



little

How to win friends ...



The Best Tasting Aspirin you can prescribe.

The Flavor Remains Stable down to the last tablet.

15¢ Bottle of 24 tablets (2½ grs. each).

We will be pleased to send samples on request.

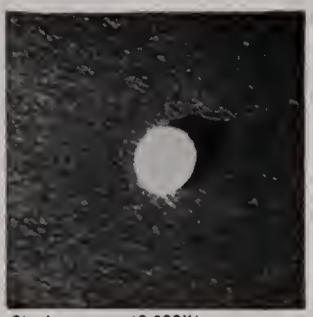
THE BAYER COMPANY DIVISION

of Sterling Drug Inc.

1450 Broadway, New York 18, N. Y.

The organisms commonly involved in

Bronchiectasis



Staph. aureus (9,000X)



Strep. pyogenes (8,500X)



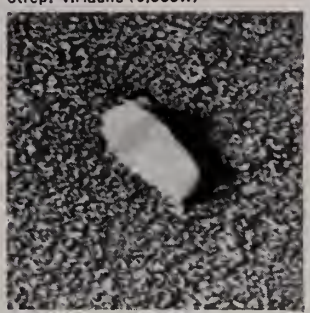
Strep. viridans (9,000X)



Strep. faecalis (10,000X)



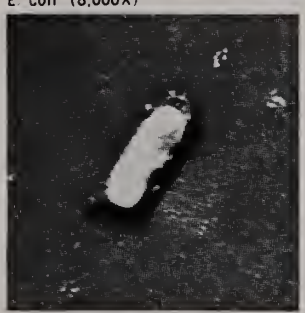
E. coli (8,000X)



K. pneumoniae (6,500X)



D. pneumoniae (10,000X)



H. influenzae (16,000X)



Aerobacter aerogenes (12,500X)

Upjohn

ELECTRON MICROGRAPHS

***All* of them are included in the more than 30 organisms susceptible to broad-spectrum**

PANMYCIN*

HYDROCHLORIDE

100 mg. and 250 mg. capsules • 125 mg. and 250 mg./tsp. oral suspension (PANMYCIN Readimixed)
100 mg./cc. drops • 100 mg./2 cc. injection, intramuscular
100 mg., 250 mg., and 500 mg. vials, intravenous

*TRADEMARK, REG. U. S. PAT. OFF. — THE UPJOHN BRAND OF TETRACYCLINE

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets

(PREDNISOLONE, MERCK) 2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

Complete
Printing and Binding Service

Commercial, Book and Job Work, Catalogues—Publications
Advertising Literature, Booklets—Broadsides
Office and Factory Forms
Loose-Leaf and Manifold Forms—Ledger Leaves and Loose-Leaf Binders
Paper Ruling
Complete Binding Equipment

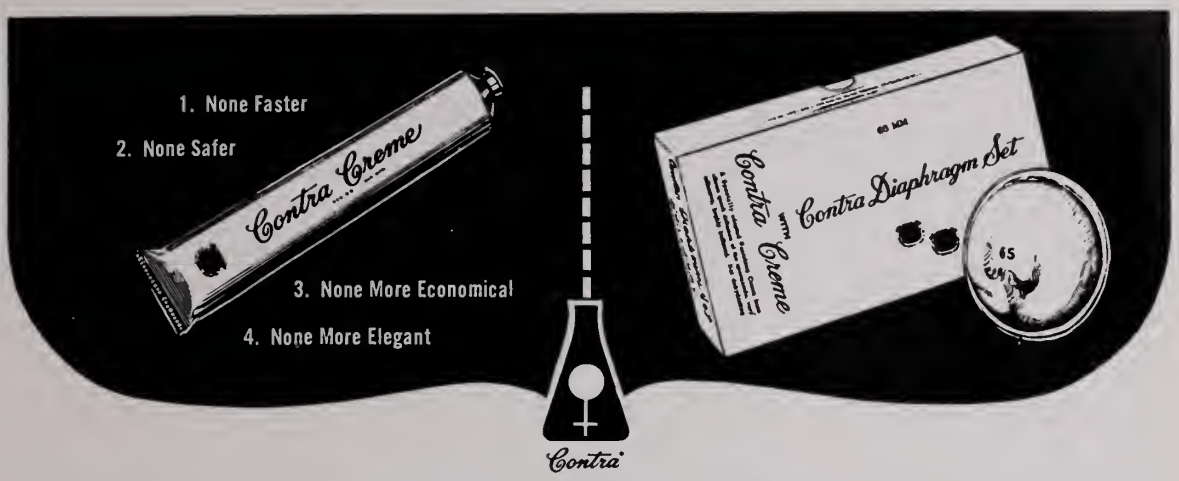
Complete Service Under One Roof

Aequaint us with your requirements. We serve you efficiently and economically.

Dial 3-1881

WILLIAMS PRINTING CO.

11-13-15 North Fourteenth Street **RICHMOND, VIRGINIA**



When conception is contraindicated

use Contra® Creme

First AMA accepted phenyl mercuric acetate contraceptive[1]. CONTRA CREME provides more of the active... most spermicidal substance known[2] ... phenyl mercuric acetate 0.06% than any other Council Accepted product. CONTRA CREME kills spermatozoa the fastest time recognized by the AMA. This has been consistently shown throughout the years to be from 2 to 5 minutes by the Brown and Gamble technique.[3,4,5,6,7,8]

and Contra® diaphragms

The DIAPHRAGM with a two year warranteed guarantee against deterioration and defects. Upon the purchase of any CONTRA DIAPHRAGM a warranteed card is given for two years of normal wear when used with CONTRA CREME. Evidence of harmlessness and efficacy have been furnished by competent medical investigators specializing in gynecology and obstetrics demonstrating long shelf life and use life.

REFERENCES:

1. James, W. F. B.: A Study Of A Simple Contraceptive Method For Clinic And Private Patients. West, J. Surg. Gyn & Ob., 59: 197, 1952. 2. Baker, J. R., Ranson, R. M. and Tynen, J.: A New Chemical Contraceptive, Lancet, P 882,, Oct. 15, 1938. 3. Report To The Council On Pharmacy And Chemistry Of The AMA: JAMA 148: 50, 1952. 4. Gamble, C. J. and Brown, R. L.: Relative Spermacidal Times of Commercial Contraceptives, Scientific Exhibit AMA Meeting, June, 1941. 5. Brown, R. L., Levenstein, I. and Becker, B.: The Spermacidal Times of Samples of Commercial Contraceptives Secured in 1942, Human Fertility 8: 65, 1943. 6. Becker, B. and Gamble, C. J.,: The Spermacidal Times of Samples of Contraceptives Secured in 1943, Human Fertility 9: 6, 1944. 7. Ibid: The Spermacidal Times of Contraceptive Jellies and Creams Secured in 1946, 11: 111, 1946. 8. New and Non Official Remedies, 1946.

For your own office prescription needs, use convenient order form below.

ORDER FORM

Contra Company 132 Front Street, New York 5, N. Y.

Please enter my order as follows: Date_____

Contra Diaphragm Sets Sizes 50mm thru 95mm (Specify sizes)

Size_____ Quantity_____ $18.00 per dozen

Contra Creme B (without applicator) Quantity_____ 9.00 per dozen

Contra Creme A (with applicator) Quantity_____ 10.80 per dozen

Contra Inserters (plastic) Quantity_____ 7.20 per dozen

Shipped prepaid in quantities of 3 or more. Check with order less 2%. Open Account_____

Signed_____ M. D.

Address_____

Please stock my druggist whose name and address follows:

Why so many physicians SPECIFY PABLUM CEREALS



TOMMY started on Pablum Rice Cereal at the age of 2 months. He likes its smooth texture (all Pablum Cereals are smooth). Pablum Cereals give him plenty of iron—½ oz. supplies 4.2 mg.—to help prevent iron deficiency anemia.

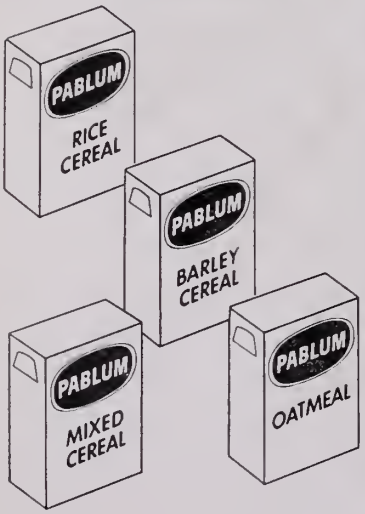


MARY LOU likes Pablum Oatmeal. Since she has been eating Pablum Cereals her growing appetite is satisfied longer.



BARBARA—like other children—enjoys *all* four Pablum® Cereals. Each variety tempts her awakening taste buds. Pablum Cereals are scientifically packaged to insure freshness. The 'Handi-Pour' spout is an extra convenience for busy mothers.

Pablum Rice Cereal
Pablum Barley Cereal
Pablum Oatmeal
Pablum Mixed Cereal



Pablum Products

DIVISION OF MEAD JOHNSON & COMPANY
EVANSVILLE, INDIANA, U. S. A.

OFFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

VIRGINIA MEDICAL MONTHLY

Contents

President's Address, Carrington Williams . . . 531

The Management of Acute Renal Insufficency, Henry G. Mishalany, B. W. Haynes, Jr. and Allen Fuller . . . 534

Intra-Uterine Rupture of Meckel's Diverticulum with Atresia of the Ileum, M. K. King, H. W. Wood, L. M. Galbraith and W. F. Murphy . . . 540

Eye Damage by Tobacco, H. S. Hedges . . . 544

Congenital Skin Defects, Gayle G. Arnold . . . 546

An Unusual Differential Problem in Endometriosis, Richard E. Bower . . . 548

(Continued on page 6)

THE N.Y. ACADEMY OF MEDICINE
DEC 19 1955
LIBRARY

Bronchitis generally responds within a few hours to

ILOTYCIN

(ERYTHROMYCIN, LILLY)

The common pathogens are rapidly destroyed; infection resolves and soreness diminishes. Notably safe and well tolerated.

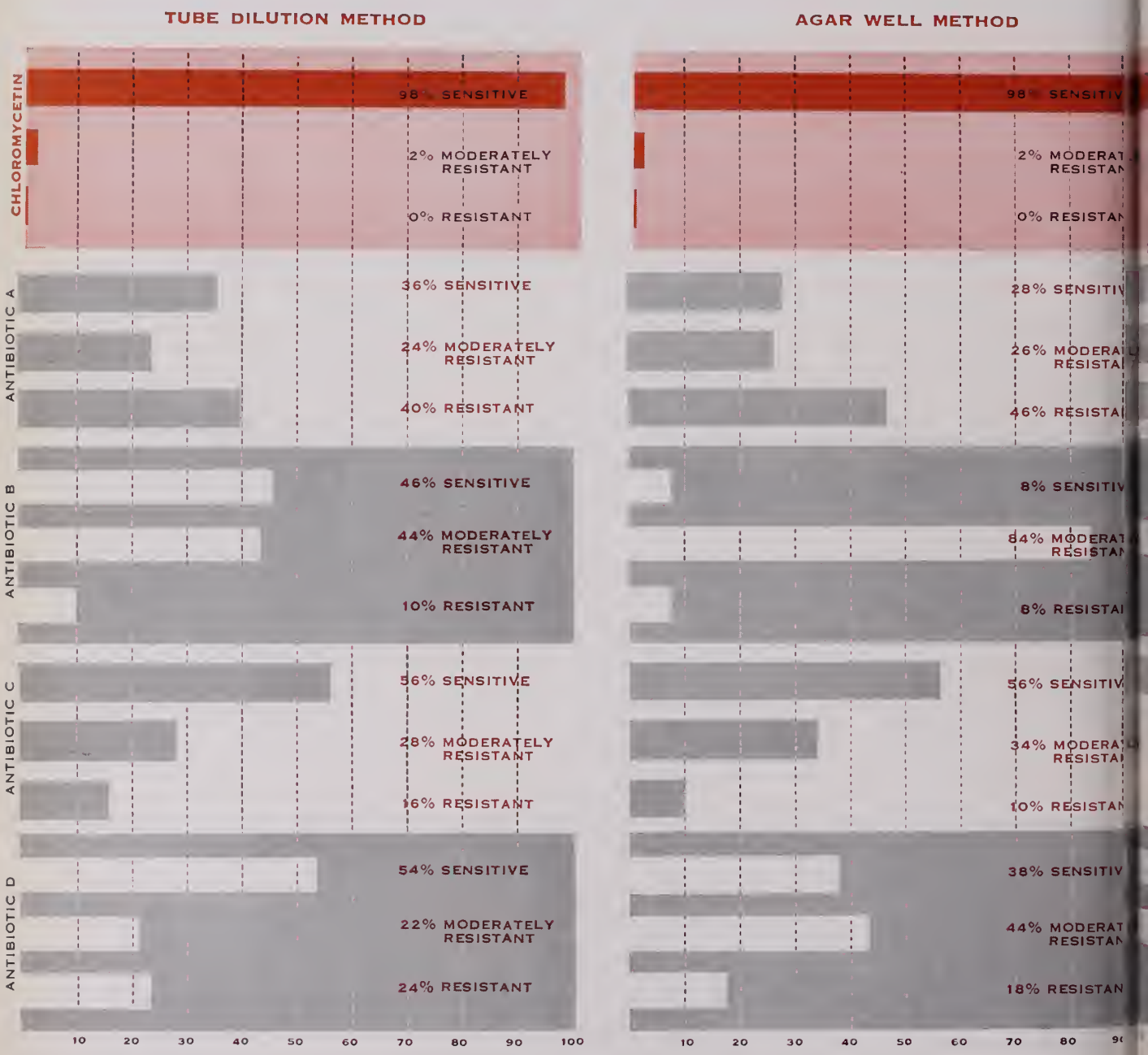
dosage: 250 or 500 mg. q. 6 h. Children, 5 mg. per pound of body weight q. 6 h.

Lilly

532233

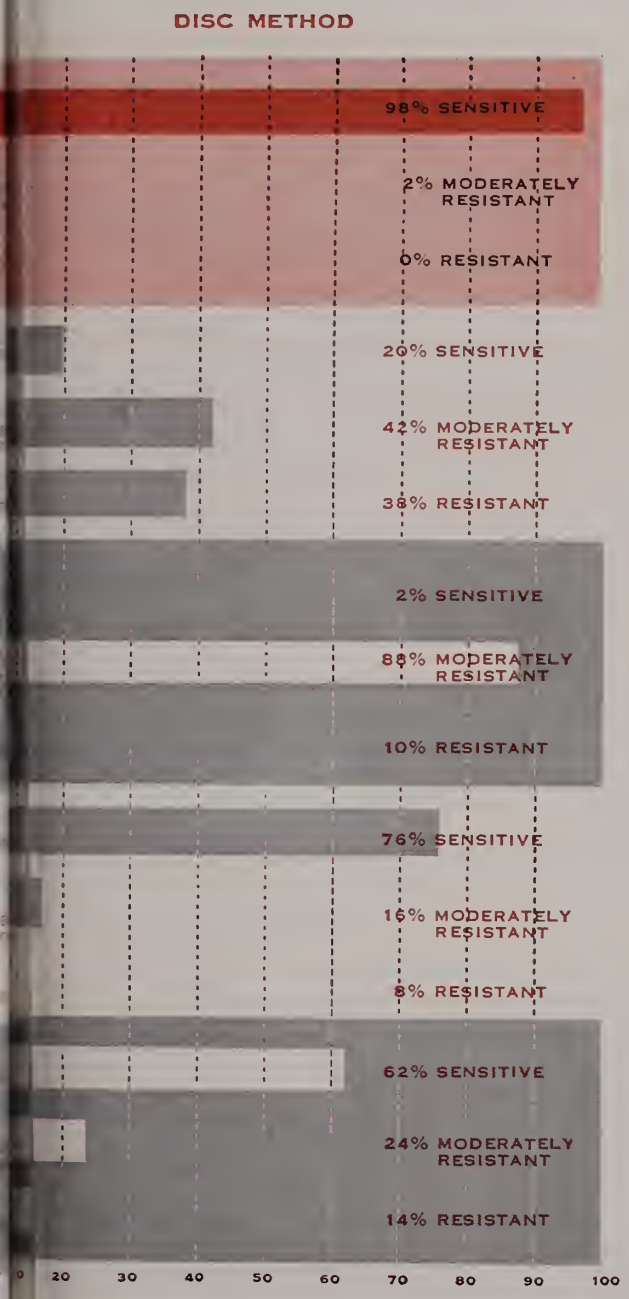
more frequently prescribe

Sensitivity of 50 Coagulase-Positive Staphylococci to CHLOROMYCETIN and Four Other Major Antib



resistant staphylococci...

ed by Three Methods*



te from Branch, Starkey, Rogers & Power[6]

Chloromycetin®

for today's problem pathogens

The increasing incidence of infections due to antibiotic resistant staphylococci poses a major clinical problem.[1-4] This is true even when recently introduced antibiotic agents are employed.[2,3,5] Recent laboratory investigations, however, show that development of staphylococcic resistance to CHLOROMYCETIN (chloramphenicol, Parke-Davis) is seldom encountered,[3,6-8] In fact, CHLOROMYCETIN "...is being used increasingly in staphylococcic infections resistant to other antibiotics."[9]

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

References: (1) Spink, W. W.: *Arch. Int. Med.* 94:167, 1954. (2) Finland, M.: *J.A.M.A.* 158:188, 1955. (3) Tebrock, H. E., & Young, W. N.: *New York J. Med.* 55:1159, 1955. (4) LeMaistre, C.: *M. Clin. North America* 39:899, 1955. (5) Kagan, B. M.: *J.M.A. Georgia* 44:210, 1955. (6) Branch, A.; Starkey, D. H.; Rodgers, K. C., & Power, E. E., *in* Welch, H., & Marti-Ibañez, F.: Antibiotics Annual, 1954-1955, New York, Medical Encyclopedia, Inc., 1955, p. 1125. (7) Kutscher, A. H.; Seguin, L.; Lewis, S.; Piro, J. D.; Zegarelli, E. V.; Rankow, R., & Segall, R.: *Antibiotics & Chemother.* 4:1023, 1954. (8) Weil, A. J., & Stempel, B.: *Antibiotic Med.* 1:319, 1955. (9) Jones, C. P.; Carter, B.; Thomas, W. L., & Creadick, R. N.: *Obst. & Gynec.* 5:365, 1955.

PARKE, DAVIS & COMPANY DETROIT, MICHIGAN

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April 1874)

Published monthly by The Medical Society of Virginia

EDITORIAL BOARD

Harry J. Warthen, Jr., M.D., *Chairman and Editor*
Wyndham B. Blanton, M.D.
Ennion S. Williams, M.D.
Lewis H. Bosher, Jr., M.D.
E. Cato Drash, M.D.
Hugh H. Trout, Jr., M.D.
James L. Hamner, M.D.
C. V. Cimmino, M.D.
Julian R. Beckwith, M.D.
A. Brownley Hodges, M.D.

The MONTHLY is not responsible for the opinions and statements of its contributors.

All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Asociation.

Managing Editor—E. SPENCER WATKINS
1105 West Franklin Street, Richmond 20.

Annual Subscription—$2.00 Single Copies—25¢

Second-Class Mail Privileges authorized at Richmond, Virginia

THE MEDICAL SOCIETY OF VIRGINIA

OFFICERS

President—JAMES P. KING, M.D., Radford

President-Elect—JAMES D. HAGOOD, M.D., Clover

Vice-Presidents—JOHN P. LYNCH, M.D., Richmond
WALTER C. ELLIOTT, M.D., Lebanon
CHARLES L. SAVAGE, M.D., Waynesboro

Executive Secretary-Treasurer—ROBERT I. HOWARD, Richmond

Councilors—A. A. CREECY, M.D., Newport News
WALTER P. ADAMS, M.D., Norfolk
BENJAMIN W. RAWLES, JR., M.D., Richmond
W. J. OZLIN, M.D., South Hill
L. P. BAILEY, M.D., Nathalie
FRANK A. FARMER, M.D., Roanoke
H. W. MILLER, M.D., Woodstock
MCLEMORE BIRDSONG, M.D., Charlottesville
JAMES P. WILLIAMS, M.D., Richlands
HARRY C. BATES, JR., M.D., Arlington

Delegates to A.M.A.
VINCENT W. ARCHER, M.D., Charlottesville
W. LINWOOD BALL, M.D., Richmond

Alternate Delegates to A.M.A.
ALLEN BARKER, M.D., Roanoke
KINLOCH NELSON, M.D., Richmond

Executive Office—1105 W. Franklin St., Richmond 20.

INDEX TO ADVERTISERS

Abbott ---- 19, 33
Ames Company, Inc. ---- 3rd Cover
Appalachian Hall ---- 31
Ayerst ---- 6
Burroughs Wellcome & Co. (U.S.A.) Inc. ---- 40, 41
Corn Products Refining Company ---- 12
Coca-Cola ---- 32
Davies, Rose & Co., Ltd. ---- 39
Eli Lily and Company ---- Front Cover, 22
Foot-so-Port Shoe Company ---- 36
Garst Bros. Dairy Inc. ---- 27
Gill Memorial Eye, Ear and Throat Hospitals, Inc. ---- 26
Jefferson, A. G. ---- 40
Johnston-Willis Hospital ---- 25
Keeley Institute ---- 27
Knox Gelatine Co., Inc., Chas. B. ---- 18
Lakeside Laboratories, Inc. ---- 17
Lederle Laboratories ---- 14-15
McGuire Clinic—St. Luke's Hospital ---- 29
Mead Johnson & Company ---- Back Cover
Medical College of Virginia ---- 25
Medical Society of Virginia, The ---- 4
Medicine in Virginia ---- 6, 40
New York Polyclinic, The ---- 38
Officers of The Medical Society of Virginia ---- 9-10
Parke, Davis & Company ---- 2-3
Patterson's Safe Service Drug Stores ---- 41
Peoples Drug Stores Inc. ---- 35
Plyler's Nursing Home, Mrs. ---- 31
Richmond Eye Hospital—Richmond Ear, Nose and Throat Hospital ---- 30
Richmond Hotels Incorporated ---- 36
Riverside Convalescent Home ---- 30
Riverside Hospital ---- 29
St. Elizabeth's Hospital ---- 32
Saint Albans ---- 25
Schering ---- 5, 20-21
Sealy Mattress Company ---- 39
Searle ---- 23
Shieffelin & Company ---- 41
State Board of Medial Examiners of Virginia, The ---- 41
Stuart Circle Hospital ---- 24
Terrace Hill Nursing Home, Inc. ---- 27
Thompson Homestead School, The ---- 6
Tucker Hospitals, Inc. ---- 24
United States Brewers Foundation ---- 13
Upjohn ---- 7
U.S. Savings Bonds ---- 34
Valentine Company, Inc. ---- 36
Viceroy Cigarettes ---- 8
Virginia Bakers Council, The ---- 42
Virginia Medical Monthly ---- 4
Westbrook Sanatorium ---- 26
White Cross Hospital ---- 28
Williams Printing Co. ---- 38
Wine Advisory Board ---- 16
Winthrop Laboratories Inc. ---- 11
Wyeth ---- 37

in rheumatoid arthritis

• 4-5 times as potent as cortisone or hydrocortisone, mg. for mg.

METICORTELONE

PREDNISOLONE, SCHERING

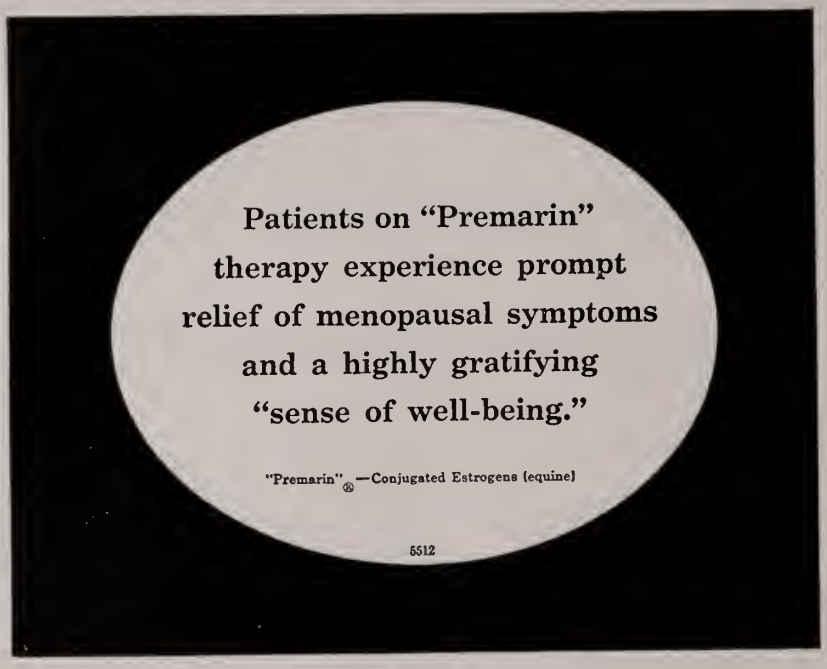
METICORTELONE resembles METICORTEN in antirheumatic, anti-inflammatory and antiallergic effectiveness.[1-11] The availability of these new steroids, first discovered and introduced by Schering, provides the physician with two valuable agents of approximately equal effectiveness in cortical hormone therapy.

Bibliography: (1) Bunim, J. J.; Pechet, M. M., and Bollet, A. J.: J.A.M.A. *157*:311, 1955. (2) Waine, H.: Bull. Rheumat. Dis. *5*:81, 1955. (3) Tolksdorf, S., and Perlman, P.: Fed. Proc. *14*:377, 1955. (4) Herzog, H. L., and others: Science *121*:176, 1955. (5) Bunim, J. J.; Black, R. L.; Bollet, A. J., and Pechet, M. M.: Ann. New York Acad. Sc. *61*:358, 1955. (6) Henderson, E.: New developments in steroid therapy of rheumatic diseases, presented at New Jersey State Medical Society Meeting, Atlantic City, New Jersey, April 17-20, 1955. (7) Boland, E. W.: California Med. *82*:65, 1955; abs., Curr. M. Digest *22*:53, 1955. (8) King, J. H., and Weimer, J. R.: A.M.A. Arch. Ophth. *54*:46, 1955. (9) Criep, L. H.: Prednisolone and prednisone in the treatment of allergic diseases, to be published. (10) Sternberg, T. H., and Newcomer, V. D.: Am. Pract. & Digest Treat. *6*:1102, 1955. (11) Gordon, D. M.: Prednisone and prednisolone in ocular disease, to be published.

Schering

METICORTELONE,* brand of prednisolone, Schering.
METICORTEN,* brand of prednisone, Schering.
*T.M.

ML-J-59



The . . . Thompson Homestead School

FOR EXCEPTIONAL CHILDREN

Year round private home and school for infants, children and adults on pleasant 250 acre farm near Charlottesville.

Write for booklet.

MRS. J. BASCOM THOMPSON, *Principal*

FREE UNION **VIRGINIA**

MEDICINE IN VIRGINIA

17th, 18th and 19th Centuries

By Wyndham B. Blanton, M.D.

Reduced Price to Members of
The Medical Society of Virginia

3 Volumes for $5.75

Order Through

THE MEDICAL SOCIETY OF VIRGINIA
P. O. Box 5085 **Richmond 20, Va.**

CONTENTS
(Continued)

Public Health ---- 550
Mental Health ---- 552
Woman's Auxiliary ---- 554
The Medical Society of Virginia ---- 555
Book Announcements ---- 567
President's Message ---- 568
Editorial ---- 569
Society Proceedings ---- 570
News ---- 570
Obituaries ---- 572
Virginia Medical Monthly—Index to Volume LXXXII ---- 575

INDEX TO ADVERTISERS—Page 4

Entered as Second Class Matter at the Postoffice, Richmond, Va.

The organisms commonly involved in

Pneumonia



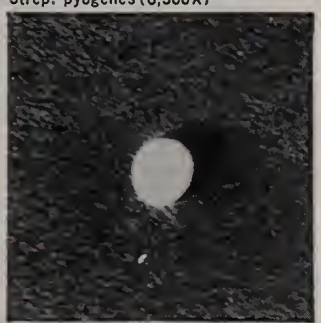
D. pneumoniae (10,000X)



K. pneumoniae (6,500X)



Strep. pyogenes (8,500X)



Staph. aureus (9,000X)

Upjohn

ELECTRON MICROGRAPHS

***All* of them are included in the more than 30 organisms susceptible to broad-spectrum**

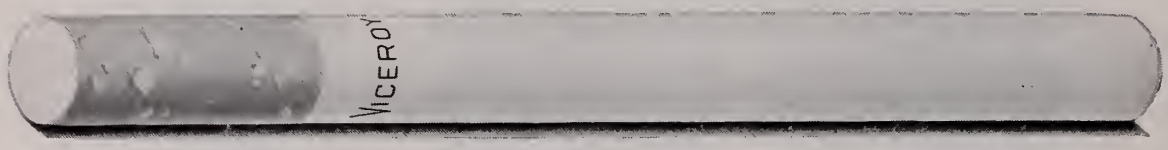
PANMYCIN*

HYDROCHLORIDE

100 mg. and 250 mg. capsules • 125 mg. and 250 mg./tsp. oral suspension (PANMYCIN Readimixed)
100 mg./cc. drops • 100 mg./2 cc. injection, intramuscular
100 mg., 250 mg., and 500 mg. vials, intravenous

*TRADEMARK, REG. U. S. PAT. OFF.—THE UPJOHN BRAND OF TETRACYCLINE

In a Filter Cigarette... it's the Filter You Depend on



The VICEROY filter tip contains 20,000 tiny filter traps, made through the solubilization of pure natural material. This is twice as many of these filter traps as any other brand.

We believe this simple fact is one of the principal reasons why so many doctors smoke *and* recommend VICEROY—the cigarette you can *really* depend on!



OFFICERS OF THE MEDICAL SOCIETY OF VIRGINIA

1955-56

President—James P. King, M.D., Radford
President-Elect—James D. Hagood, M.D., Clover
Past-President—Carrington Williams, M.D., Richmond
Vice-Presidents—John P. Lynch, M.D., Richmond
Walter C. Elliott, M.D., Lebanon
Charles L. Savage, M.D., Waynesboro
Executive Secretary-Treasurer—Robert I. Howard, Richmond
Editor, Virginia Medical Monthly—Harry J. Warthen, Jr., M.D., Richmond
Health Commissioner—Mack I. Shanholtz, M.D., Richmond
Speaker of House of Delegates—John T. T. Hundley, M.D., Lynchburg
Vice-Speaker of House of Delegates—Allen Barker, M.D., Roanoke

COUNCILORS

A. A. Creecy, M.D., Newport News
Walter P. Adams, M.D., Norfolk
Benjamin W. Rawles, Jr., M.D., Richmond
Wilkins J. Ozlin, M.D., South Hill
Louis P. Bailey, M.D., Nathalie
Frank A. Farmer, M.D., Roanoke
Harold W. Miller, M.D., Woodstock
McLemore Birdsong, M.D., Charlottesville
James P. Williams, M.D., Richlands
Harry C. Bates, Jr., M.D., Arlington

Delegates to American Medical Association

Vincent W. Archer, M.D., Charlottesville
W. Linwood Ball, M.D., Richmond

Alternates

Allen Barker, M.D., Roanoke
Kinloch Nelson, M.D., Richmond

COMITTEES

Standing Committees

Editorial Board

Harry J. Warthen, Jr., M.D., *Chairman & Editor*, Richmond
Wyndham B. Blanton, M.D., Richmond (1)
Ennion Williams, M.D., Richmond (1)
Lewis H. Bosher, Jr., M.D., Richmond (1)
E. Cato Drash, M.D., Charlottesville (2)
Hugh H. Trout, Jr., M.D., Roanoke (2)
James L. Hamner, M.D., Mannboro, (2)
C. V. Cimmino, M.D., Fredericksburg (3)
Julian R. Beckwith, M.D., Charlottesville (3)
A. Brownley Hodges, M.D., Norfolk, (3)

Postgraduate Medical Education

Carrington Williams, M.D., *Chairman*, Richmond
James L. Hamner, M.D., Mannboro
Kinloch Nelson, M.D., Richmond
William Parson, M.D., Charlottesville
C. V. Cimmino, M.D., Fredericksburg
Mack I. Shanholtz, M.D., Richmond

Ethics

H. H. Hurt, M.D., *Chairman*, Lynchburg (1)
M. H. Harris, M.D., West Point (2)
Guy R. Fisher, M.D., Staunton, (3)

Mediation

C. L. Harrell, M.D., *Chairman*, Norfolk (1)
John T. T. Hundley, M.D., Lynchburg (2)
James L. Hamner, M.D., Mannboro (3)
Vincent W. Archer, M.D., Charlottesville (4)
Carrington Williams, M.D., Richmond (5)

Judicial

J. Morrison Hutcheson, M.D., *Chairman*, Richmond (1)
Richard P. Bell, Jr., M.D., Staunton (2)
Hugh G. Stokes, Jr., M.D., Williamsburg (3)

Legislative

J. D. Hagood, M.D., *Chairman*, Clover, (1)
W. C. Caudill, M.D., Pearisburg (1)
Dean B. Cole, M.D., Richmond (1)
Benjamin W. Rawles, Jr., M.D., Richmond (2)
Mallory S. Andrews, M.D., Norfolk (2)
John C. Watson, M.D., Alexandria (2)
Edward E. Haddock, M.D., Richmond (3)
Frank A. Farmer, M.D., Roanoke (3)
W. C. Elliot, M.D., Lebanon (3)
William H. Barney, M.D., Lynchburg (Associate)

Medical Service

Russell V. Buxton, M.D., *Chairman*, Newport News (2)
Frank A. Farmer, M.D., Roanoke (2)
James P. Williams, M.D., Richlands (2)
T. B. McCord, M.D., Fairfax (1)
Charles H. Lupton, M.D., Norfolk (1)
Charles L. Savage, M.D., Waynesboro (1)
Snowden C. Hall, Jr., M.D., Danville (1)
Joseph T. Showalter, M.D., Christiansburg (1)
Arthur L. Van Name, Jr., M.D., Urbanna (2)
Richard E. Palmer, M.D., Alexandria (2)

Membership

A. P. Jones, M.D., *Chairman*, Roanoke (2)
Henry J. Langston, M.D., Danville (1)
Acors W. Thompson, M.D., Falls Church (3)

Scientific Exhibits and Clinics

Frank M. Blanton, M.D., *Chairman*, Richmond (2)
Alvin C. Wyman, M.D., Alexandria (1)
Andrew F. Giesen, M.D., Radford (3)

Public Relations

Harry C. Bates, Jr., M.D., *Chairman*, Arlington (3)
John Wyatt Davis, Jr., M.D., Lynchburg, Vice-Chairman (1)
Harry B. Stone, Jr., M.D., Roanoke (2)
W. T. Thompson, M.D., Richmond (2)
Mason C. Andrews, M.D., Norfolk (1)
Ira L. Hancock, M.D., Creeds (3)

Program

George B. Craddock, M.D., *Chairman*, Lynchburg (2)
Mary Elizabeth Johnston, M.D., Tazewell (3)
A. A. Creecy, M.D., Newport News (1)
Elam C. Toone, M.D., Richmond (Associate)

Finance

Walter A. Porter, M.D., *Chairman*, Hillsville (1)
Harry J. Warthen, Jr., M.D., Richmond (2)
Fletcher J. Wright, Jr., M.D., Petersburg (3)

Special Committees

Child Health

Paul Hogg, M.D., *Chairman*, Newport News
W. E. Chapin, M.D., Richmond
John Walke, M.D., Roanoke
Robert Cox, M.D., Lynchburg
Harry Cox, M.D., Portsmouth
Page Booker, M.D., Charlottesville
Gayle Arnold, M.D., Richmond

Advisory to Woman's Auxiliary

Charles L. Outland, M.D., *Chairman*, Richmond
Donald S. Daniel, M.D., *Vice-Chairman*, Richmond
William V. Rucker, M.D., Bedford
Lloyd B. Burk, M.D., Arlington

Walter Reed Commission

R. B. Bowles, M.D., *Chairman*, Mathews
John R. Gill, M.D., Mathews
Raymond S. Brown, M.D., Gloucester
Herbert L. Shinn, M.D., Halliford

Maternal Health

A. Tyree Finch, M.D., *Chairman*, Farmville
H. H. Ware, Jr., M.D., Richmond
L. L. Shamburger, M.D., Richmond
E. S. Groseclose, M.D., Lynchburg
George S. Hurt, M.D., Roanoke
Mason C. Andrews, M.D., Norfolk
Garrett Dalton, M.D., Radford
Walter L. McMann, M.D., Danville
Edwin Rucker, M.D., Richmond
Walter Rucker, M.D., Richmond
W. N. Thornton, M.D., Charlottesville
James J. Dunne, M.D., Richmond

To Confer With State Board of Nurse Examiners

James M. Habel, M.D., *Chairman*, Suffolk
Andrew D. Hart, M.D., Charlottesville
Eugene L. Lowenberg, M.D., Norfolk
Frank Johns, M.D., Richmond
John E. Gardner, M.D.,Roanoke

Tuberculosis

William H. Barney, M.D., *Chairman*, Lynchburg
William E. Apperson, M.D., Richmond
L. R. Broome, M.D., Catawba Sanatorium
Thomas Hunnicutt, Jr., Newport News
John A. Sims, M.D., Alexandria

Cerebral Palsy

Allen M. Ferry, M.D., *Chairman*, Arlington
Gayle G. Arnold, M.D., Richmond
Margaret M. Glendy, M.D., Roanoke
Louise F. Galvin, M.D., Richmond
Gilbert J. Rich, M.D., Roanoke
Richard M. Reynolds, M.D., Norfolk

Mental Hygiene

Thomas E. Edwards, M.D., *Chairman*, Charlottesville
David C. Wilson, M.D., Charlottesville
John R. Saunders, M.D., Richmond
Granville L. Jones, M.D., Williamsburg
John B. McKee, M.D., Winchester
John T. T. Hundley, M.D., Lynchburg
George I. Myer, M.D., Roanoke
David M. Wayne, M.D., Bluefield

Rehabilitation

Roy M. Hoover, M.D., *Chairman*, Roanoke
Benjamin W. Rawles, Jr., M.D., *Vice-Chairman*, Richmond
Reno R. Porter, M.D., Richmond
George A. Duncan, M.D., Norfolk
Joseph R. Blalock, M.D., Marion
J. Treacy O'Hanlan, M.D., Waynesboro
Leroy Smith, M.D., Richmond
Frank B. Stafford, M.D., Charlottesville
Mack I. Shanholtz, M.D., Richmond
G. S. Fitz-Hugh, M.D., Charlottesville
Charles L. Savage, M.D., Waynesboro
Houston L. Bell, M.D., Roanoke
Henry R. Bourne, M.D., Danville
C. J. Murphy, M.D., Alexandria
O. Anderson Ench, M.D., Arlington

Cancer

John R. Knight, M.D., *Chairman*, Norfolk
George Cooper, Jr., M.D., Charlottesville
William D. Dolan, Jr., M.D., Arlington
Joseph W. Houck, M.D., Lynchburg
Frank D. Daniel, M.D., Charlottesville
John Hooker, M.D., Danville
A. C. Wyman, M.D., Alexandria
G. J. Carroll, M.D., Suffolk

Conservation of Hearing

Francis H. McGovern, M.D., *Chairman*, Danville
P. N. Pastore, M.D., Richmond
Cal T. Burton, M.D., Roanoke
Cary N. Moon, Jr., M.D., Charlottesville
Gordon Harrell, M.D., Norfolk

Federal Medical Services

John T. Hazel, M.D., *Chairman*, Arlington
John O. Boyd, Jr., M.D., Roanoke
Paul D. Camp, M.D., Richmond
Ernest G. Scott, M.D., Lynchburg
Ralph R. Landes, M.D., Danville

American Medical Education Foundation

Richard Michaux, M.D., *Chairman*, Richmond
Marcellus Johnson, III, M.D., Vice-Chairman, Roanoke
John R. Mapp, M.D., Nassawadox
Mallory S. Andrews, M.D., Norfolk
Carrington Williams, Jr., M.D., Richmond
L. H. Bracey, M.D., South Hill
Clyde W. Vick, M.D., Petersburg
Clifford G. Gaddy, M.D., Danville
John W. Davis, Jr., M.D., Lynchburg
Richard P. Bell, Jr., M.D., Staunton
Chester L. Riley, M.D., Winchester
E. Cato Drash, M.D., Charlottesville
Norman R. Tingle, M.D., Nuttsville
R. D. Campbell, M.D., Saltville
George W. McCall, M.D., Bristol
David S. Phlegar, M.D., Blacksburg
J. P. Sutherland, M.D., Grundy
H. Haskins Ferrell, M.D., Alexandria
Waverly R. Payne, M.D., Newport News
Hugh G. Stokes, M.D., Williamsburg

To Assist American Diabetes Association

William R. Jordan, M.D., *Chairman*, Richmond
Robert C. Crawford, M.D., Roanoke
W. C. Salley, M.D., Norfolk
Stuart H. Catron, Jr., M.D., Abingdon

Liaison Committee to Confer With U.M.W. Welfare Fund

James P. Williams, M.D., *Chairman*, Richlands
Kinloch Nelson, M.D., Richmond
Mack I. Shanholtz, M.D., Richmond
John O. Boyd, Jr., M.D., Roanoke
Rufus P. Brittain, M.D., Tazewell
William B. Barton, M.D., Stonega
Thomas Hunter, M.D., Charlottesville
John B. Truslow, M.D., Richmond

National Emergency Medical Service

Fletcher J. Wright, Jr., M.D., *Chairman*, Petersburg
W. Ross Southward, Jr., M.D., Richmond
Walter P. Adams, M.D., Norfolk
E. C. Drash, M.D., Charlottesville
Kinloch Nelson, M.D., Richmond
James L. Hamner, M.D., Mannboro
Alexander McCausland, M.D., Roanoke

House

Harry J. Warthen, Jr., M.D., *Chairman*, Richmond
Donald S. Daniel, M.D., Richmond
Fletcher J. Wright, Jr., M.D., Petersburg

Polio

Lee E. Sutton, Jr., M.D., *Chairman*, Richmond
E. A. Harper, M.D., Lynchburg
Robert C. Hood, M.D., Arlington
Charles B. Bray, Jr., M.D., Roanoke
McLemore Birdsong, M.D., Charlottesville
Mason Romaine, M.D., Petersburg
James M. Suter, M.D., Bristol

Conservation of Sight

W. W. Taylor, M.D., *Chairman*, Norfolk
Edgar Childrey, M.D., Richmond
Parker H. Lee, M.D., Lynchburg
R. O. Smith, M.D., Pulaski
William F. Hatcher, M.D., Roanoke
Meade C. Edmunds, M.D., Petersburg

Physicians Liability Insurance

Guy W. Horsley, M.D., Richmond
Frank A. Farmer, M.D., Roanoke
James L. Chitwood, M.D., Pulaski
Charles V. Amole, M.D., Alexandria
W. Callier Salley, M.D., Norfolk

Society Headquarters Improvement

Benjamin W. Rawles, Jr., M.D., *Chairman*, Richmond
Harry C. Bates, Jr., M.D., Arlington
James A. Thweatt, M.D., Creeds
Allen Barker, M.D., Roanoke
Ira L. Hancock, M.D., Creeds

Non-Metropolitan Convention Cities

Kinloch Nelson, M.D., Richmond

Study the Treatment of Alcoholism

Morris M. Pinckney, M.D., *Chairman*, Richmond
R. C. Longan, Jr., M.D., Richmond
W. T. Thompson, Jr., M.D., Richmond

National Legislative

Vincent W. Archer, M.D., *Chairman*, Charlottesville
John C. Watson, M.D., *Co-Chairman*, Alexandria
John P. Lynch, M.D., Richmond
A. A. Creecy, M.D., Newport News
Walter P. Adams, M.D., Norfolk
Benjamin W. Rawles, Jr., M.D., Richmond
Wilkins J. Ozlin, M.D., South Hill
Louis P. Bailey, M.D., Nathalie
Frank A. Farmer, M.D., Roanoke
Harold W. Miller, M.D., Woodstock
McLemore Birdsong, M.D., Charlottesville
James P. Williams, M.D., Richlands
Harry C. Bates, Jr., M.D., Arlington

Liaison with Department of Public Welfare

Malcolm H. Harris, M.D., *Chairman*, West Point
G. B. Setzler, M.D., Pennington Gap
A. L. Carson, M.D., Richmond
H. B. Mulholland, M.D., Charlottesville
John P. Lynch, M.D., Richmond

Venereal Disease Control

James W. Love, M.D., *Chairman*, Alexandria
Thomas W. Murrell, Jr., M.D., Richmond
Edward P. Cawley, M.D., Charlottesville
O. H. McClung, Jr., M.D., Lexington
Jethro H. Irby, M.D., Martinsville



The name
Winthrop-Stearns Inc.
has been changed to

Winthrop
LABORATORIES INC.

Only the name is changed—nothing else.

This new name better indicates the nature
of our operations which is to supply
high quality therapeutic and diagnostic pharmaceuticals

MANUFACTURERS OF THE FOLLOWING DIAGNOSTIC AND THERAPEUTIC AGENTS

ARALEN® PHOSPHATE
AVERTIN® WITH AMYLENE HYDRATE
CREAMALIN®
DEMEROL® HYDROCHLORIDE
DIODRAST® 35%
DIODRAST® 70%
DIODRAST® COMPOUND SOLUTION
DRISDOL® IN PROPYLENE GLYCOL
DRISDOL® WITH VITAMIN A DISPERSIBLE
EVIPAL® SODIUM
HYPAQUE® SODIUM
ISUPREL® HYDROCHLORIDE
LEVOPHED® BITARTRATE
MEBARAL®
MILIBIS®
NEO-SYNEPHRINE® HYDROCHLORIDE
pHisoHex®
PONTOCAINE® HYDROCHLORIDE
SALYRGAN®-THEOPHYLLINE
TELEPAQUE®
ZEPHIRAN® CHLORIDE

and many others

Trademarks reg. U.S. Pat. Off.

KARO SYRUP

BELONGS IN THIS PICTURE!

...a carbohydrate of choice
in milk modification for 3 generations

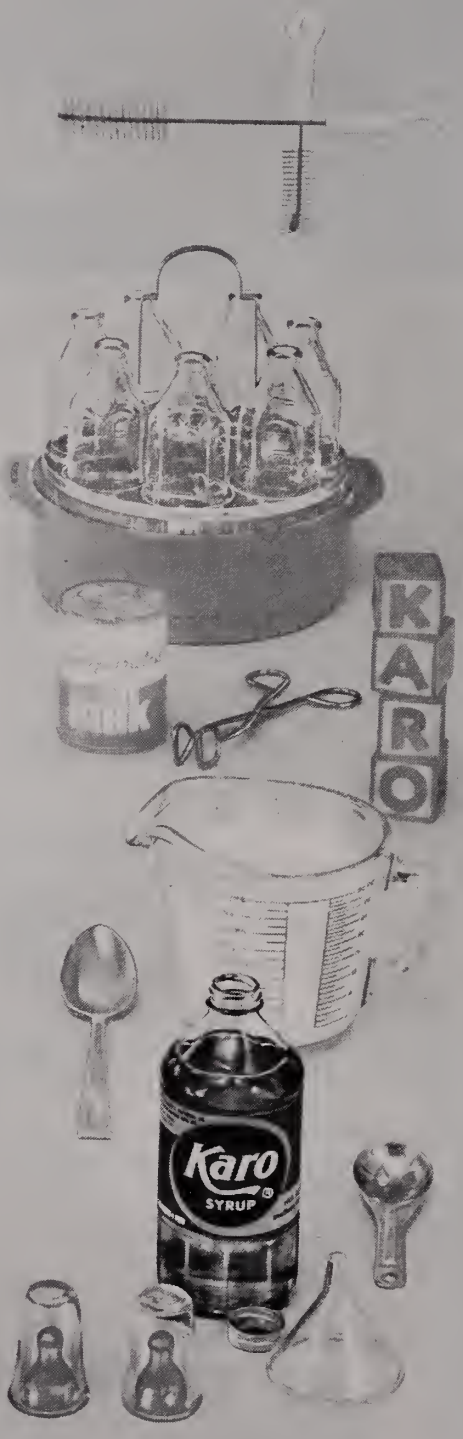
OPTIMUM caloric balance—60% of caloric intake, gradually achieved in easily assimilable carbohydrates—is assured with Karo. Milk alone provides 28%, or less than half the required carbohydrate intake.

A MISCIBLE liquid, Karo is quickly dissolved, easy to use, readily available and inexpensive.

A BALANCED mixture of dextrins, maltose and dextrose, Karo is well tolerated, easily digested, gradually absorbed at spaced intervals and completely utilized.

PRECLUDES fermentation and irritation. Produces no reactions, hypoallergenic. Bacteria-free Karo is safe for feeding prematures, newborns, and infants—well and sick

LIGHT and dark Karo are interchangeable in formulas; both yield 60 calories per tablespoon.

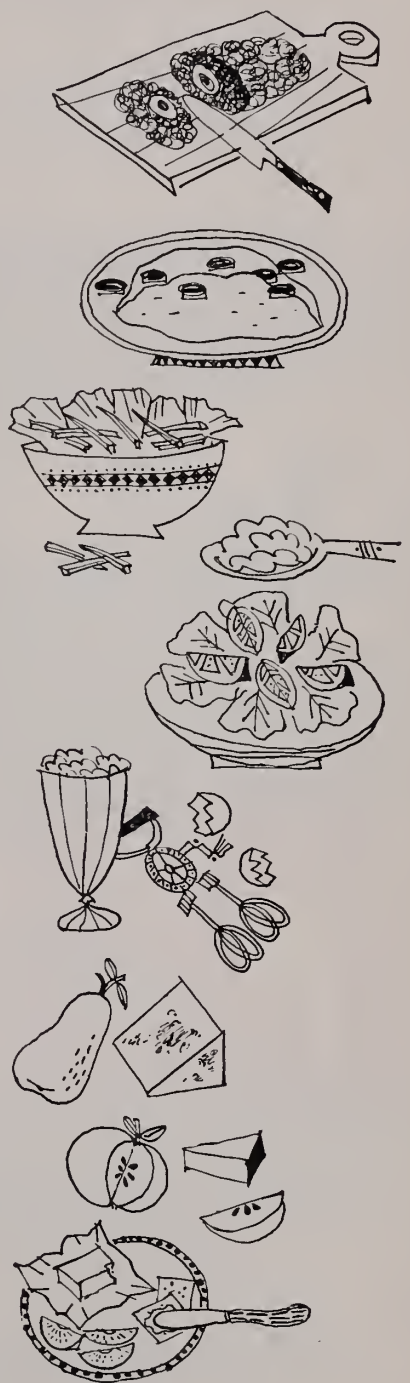


CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.



The High Protein Diet fits any budget!

Getting enough high-quality protein in your patient's diet doesn't require an unlimited budget. Meat, of course, is an outstanding source, but it can easily be reinforced with other protein foods.



Mix a protein bonus in the main dishes—

Your patient can add skim milk powder along with the seasonings in meat loaf—then hide hard-cooked eggs inside for a bright-eyed surprise.

A fluffy omelet folded over penny-sliced frankfurters, ground cooked meat, flaked fish or cheese is both tempting and economical.

And a green salad topped generously with shoestrings of meat and cheese carries its weight in protein.

Then add more to the rest of the meal—

Cottage cheese is happily versatile. It tops any salad—fruit, vegetable, flaked fish. Makes a pleasing spread, too, especially on dark breads. Thinned with milk and mixed with chili sauce, it's a zesty salad dressing. Or a good amount can be whipped into mashed potatoes.

An egg white whipped into fruit juice makes a frothy flip. Or you might suggest gelatin instead.

And a fruit-cheese dessert is a gourmet's delight. Pears go with blue cheese, apples with Camembert, orange sections with cream or cottage cheese.

Of course, not all protein foods supply all the amino acids. But with sufficient variety, the diet is likely to supply all the essential ones, and at the same time assure adequate amounts of the vitamins necessary for proper protein metabolism.

United States Brewers Foundation

Beer—America's Beverage of Moderation

Protein 0.8 Gm. Calories 104/8 oz. glass (AVERAGE OF AMERICAN BEERS)

If you'd like reprints of 12 different diets, please write United States Brewers Foundation, 535 Fifth Avenue, New York 17, N. Y

Solid reasons for prescribing

ACHROMYCIN*

Hydrochloride
Tetracycline HCl *Lederle*

For nearly two years, ACHROMYCIN has been in daily use. Thousands of practicing physicians in every field have substantiated its advantages, and the confirmations mount every day.

In any of its many dosage forms, ACHROMYCIN has proved to be well tolerated by patients of every age. It provides true broad-spectrum activity, rapid diffusion, and prompt control of a wide variety of infections caused by Gram-negative and Gram-positive bacteria, rickettsia, and certain viruses and protozoa.

ACHROMYCIN—an antibiotic of choice, produced under rigid controls in Lederle's own laboratories.

LEDERLE LABORATORIES DIVISION *American Cyanamid Company* PEARL RIVER, NEW YORK

*REG. U.S. PAT. OFF.

Lederle

wide-spectrum activity

prompt control of infection

rapid diffusion

negligible side effects

After Bread Comes Wine...

*The Second Legacy of the Creator**

From the very dawn of history, wine, the classic beverage of moderation, has been acclaimed for its appetite-stimulant properties, its role in nutrition, its function as an aperitif.

However, until quite recently no serious attempt was made at a scientific objective study of the rationale of wine as a nutritional or medicinal agent.

Recently, in response to a demand within the medical profession that fact be separated from folklore, the Wine Advisory Board decided to institute a series of studies to determine the true therapeutic niche of wine based on a more accurate knowledge of its chemical constituents, its physiological and pharmacological actions.

The results to date have been most gratifying. For example, we have learned that—

—Wine stimulates olfactory acuity—markedly increasing appetite in anorexia;

—Wine increases appreciably not only the volume but the proteolytic power of gastric juice, thereby encouraging digestion notably in convalescents and older patients;

—Wine serves as a quick-energy food. Its small amount of hexose is speedily absorbed and its moderate content of alcohol is metabolized readily even by diabetics;

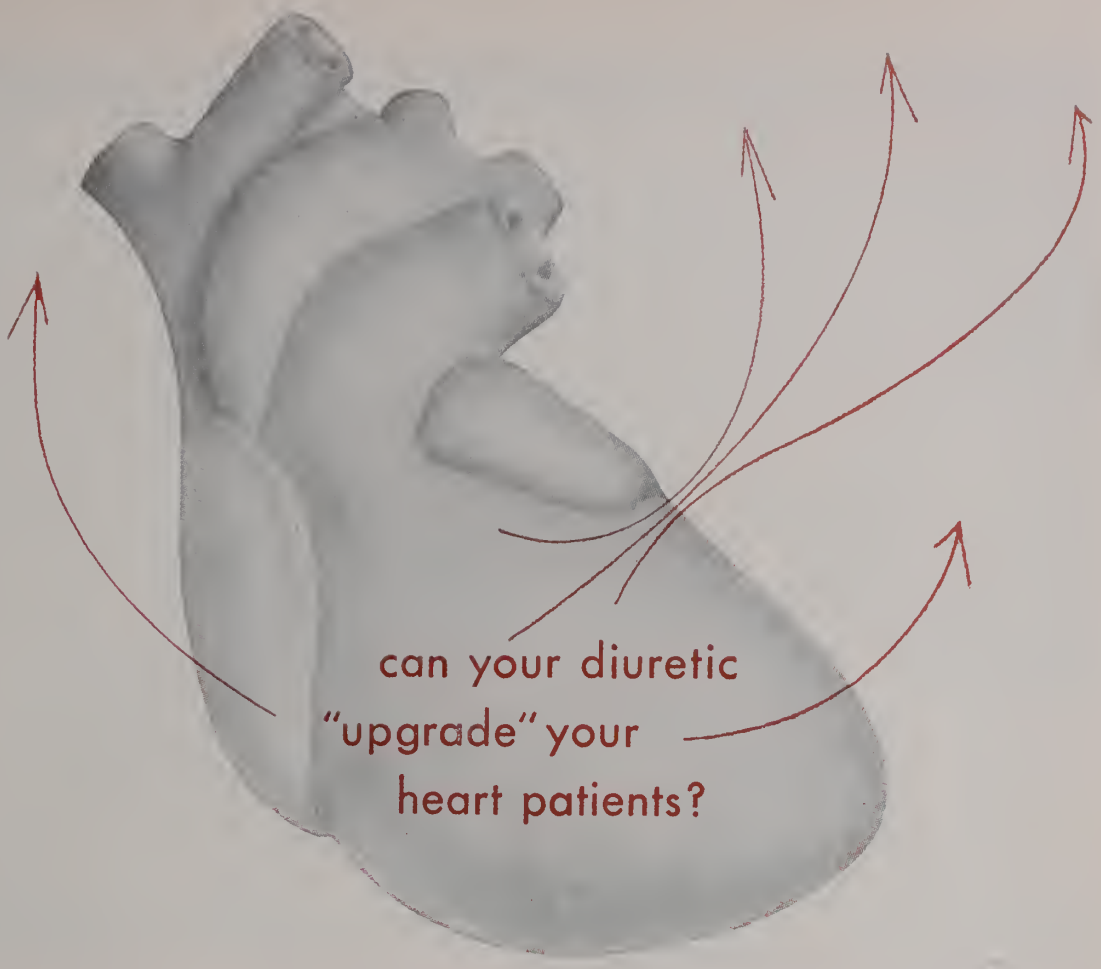
—Wine possesses significant vasodilating, diuretic and relaxing properties of value in the field of cardiology;

—A little Port or Sherry at bedtime is a valuable relaxant to the insomniac and may obviate the need for sedative medication.

And wine can help brighten the often unappealing character of special or restricted dietaries—a psychological boost of inestimable value to the debilitated and depressed patient.

We believe you will find "Uses of Wine in Medical Practice" a valuable addition to your files. A copy is available to you at no expense, by writing to: Wine Advisory Board, 717 Market Street, San Francisco 3, California.

*Georges Ray, Vins de France, Paris, University Press, 1946 (p. 75).



know your diuretic

fewer restrictions of activity are the benefit of prolonged use of those diuretics effective over the entire range of cardiac failure. The organomercurials—parenteral and oral—improve the classification and prognosis of your decompensated patients. Diuretics of value only in milder grades of failure, or which must be given intermittently because of refractoriness or side effects, are incapable of "upgrading" the cardiac patient.

TABLET

NEOHYDRIN®

BRAND OF CHLORMERODRIN

(18.3 MG. OF 3-CHLOROMERCURI-2 -METHOXY-PROPYLUREA IN EACH TABLET)

for "...a new picture of the patient in congestive heart failure."*
replaces injections in 80% to 90% of patients

*Leff, W., and Nussbaum, H. E.: J. M. Soc. New Jersey 50:149, 1953.

a standard for initial control of severe failure

MERCUHYDRIN® SODIUM
BRAND OF MERALLURIDE INJECTION

Leadership in diuretic research
Lakeside LABORATORIES, INC., MILWAUKEE 1, WISCONSIN

88855

KNOX Protein Previews



New Knox Food Exchange Chart Eliminates Calorie Counting



To help your obese patients reduce and stay reduced, Knox introduced this year a new dieting plan based on the use of nutritionally tested Food Exchanges.[1] The very heart of this new dietary is a "choice-of-foods diet list" chart which presents diets of 1200, 1600 and 1800 calories.

Each of these diets may be easily modified to meet special needs. However, the important points for your patients are that the use of this chart eliminates calorie counting, permits the patient a wide range of food choices and dispels that old empty feeling by allowing between-meal snacks.

These advantages should make your management of difficult and average cases easier. If you would like a supply of the new Knox charts for your practice, just fill in the coupon below.

1. Developed by the U. S. Public Health Service assisted by committees of The American Diabetes Association, Inc. and The American Dietetic Association.



Chas. B. Knox Gelatine Co., Inc.
Professional Service Dept. SJ-12
Johnstown, N. Y.

Please send me____copies of the new, color-coded "choice-of-foods diet list" chart.

YOUR NAME AND ADDRESS:

When little patients balk at scary, disquieting examinations (before you've begun) . . .

When they're frightened and tense (and growing more fearful by the minute) . . .

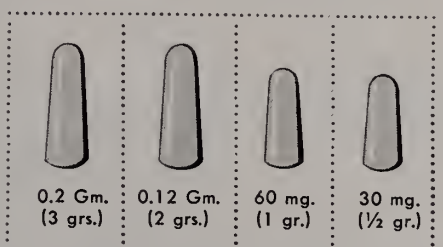
When they need prompt sedation (and the oral route isn't feasible) . . . try

NEMBUTAL®

Sodium Suppositories



With short-acting NEMBUTAL, the dosage required is small and the margin of safety is wide. And—since the drug is quickly and completely destroyed in the body—there is little tendency toward morning-after hangover. Keep a supply of all four sizes of NEMBUTAL suppositories on hand. Be ready for the frightened ones before their fears begin. Abbott



® Pentobarbital Sodium, Abbott

512131

when hormones

are preferred therapy...

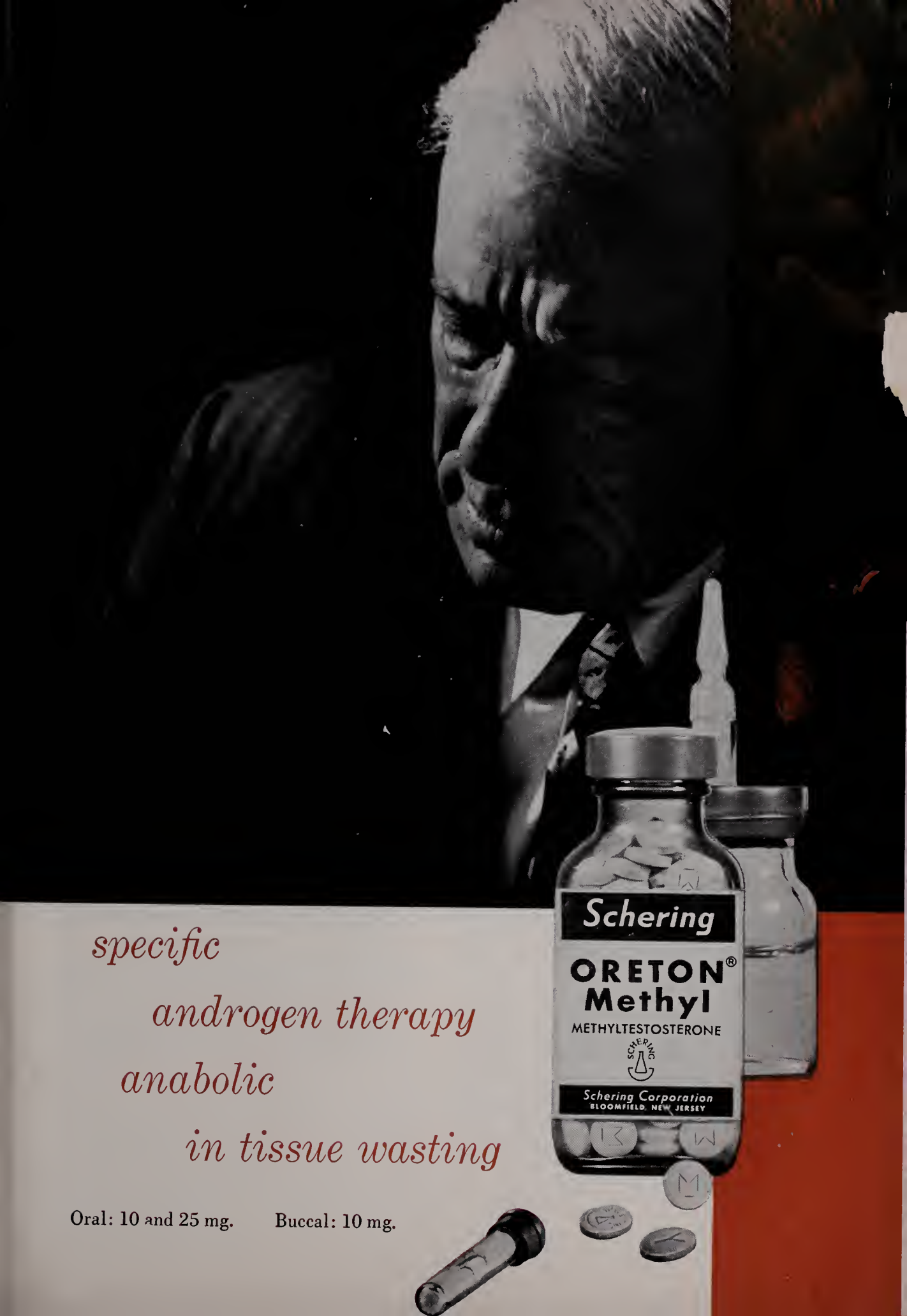
SCHERING HORMONES

assure superior quality

Schering's high standards and quality control assure products of unchanging potency and purity for uniform action and clinical efficacy.

minimal cost

Manufacturing know-how and continuing research by Schering provide preparations of highest quality at minimum cost.



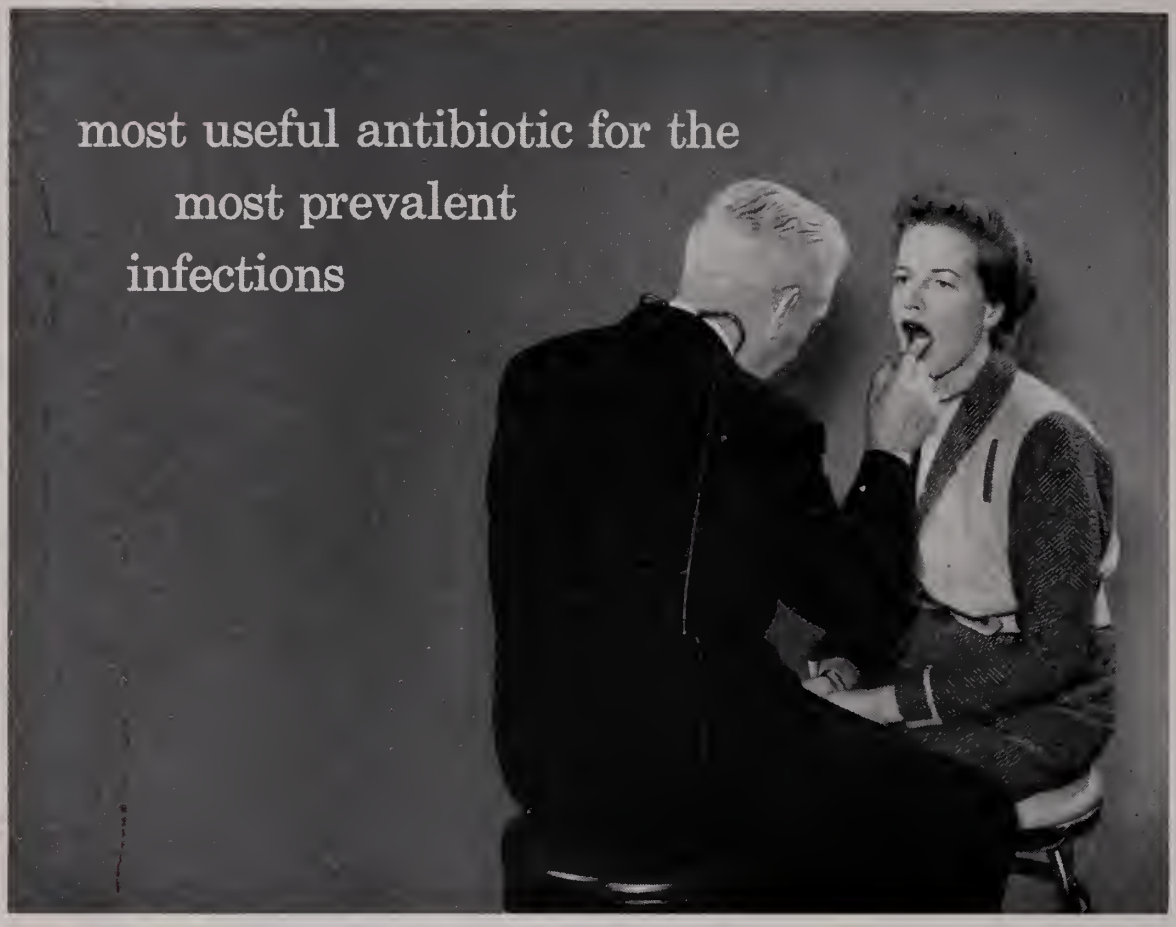
specific

androgen therapy

anabolic

in tissue wasting

Oral: 10 and 25 mg. Buccal: 10 mg.



532179

'Ilotycin'

(ERYTHROMYCIN, LILLY)

Over 96% of all acute bacterial respiratory infections respond readily

'Ilotycin' kills susceptible pathogens of the respiratory tract. Therefore, the response is decisive and quick. Bacterial complications such as otitis media, chronic tonsillitis, and pyelitis are less likely to occur.

Most pathogens of the respiratory tract are rapidly destroyed. Yet, because the coliform bacilli are highly insensitive, the bacterial balance of the intestine is seldom disturbed.

'Ilotycin' is notably safe and well tolerated. Urticaria, hives, and anaphylactic reactions have not been reported in the literature.

Staphylococcus enteritis, avitaminosis, and moniliasis have not been encountered.

Gastro-intestinal hypermotility is not observed in bed patients and is seen in only a small percentage of ambulant patients.

Available as specially coated tablets, pediatric suspensions, I.V. and I.M. ampoules.

Lilly

QUALITY / RESEARCH / INTEGRITY

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U.S.A.

The Virginia
MEDICAL
MONTHLY

December, 1955
Vol. 82, No. 12
Whole No. 1242

President's Address

CARRINGTON WILLIAMS, M.D.
Richmond, Virginia

IT IS A very happy occasion for me, as your President, to welcome The Medical Society of Virginia to its 108th meeting in my hometown. I think that the number of doctors who have lived here as long as I have is very small, so that I can speak as a long time resident as well as officially. It is a real pleasure and privilege for us to have you and we look forward to your early return.

I thank you for the honor you have done me. To have been your leader for a year is indeed an honor that I will always cherish and look back upon with pleasure and deep appreciation.

I will speak to you tonight concerning certain activities and conditions which seem to me to be of importance to our profession. I know that I will meet with disagreement on some of these thoughts and that others will be misunderstood largely on account of the brevity of this presentation, but I hope you will consider them only in the light of the wellbeing of our profession and our duties to our patients.

Medical Organizations

Organizations of medical men are too numerous. The strength of our organized efforts lies in the county and state societies and the American Medical Association. In general these societies have been responsible for most of the progress made in medicine over the years. The special societies are very necessary and have been a great stimulus in the development of the specialties. In addition, however, the regional groups are widespread and there are many small local staffs and clubs. Notable among the regional societies is the Southern Medical Association. This organization is the next largest in number of members to the A. M. A. It seems to me that medicine as a whole would be stronger if, somehow, such groups could be brought under the auspices of the A. M. A. It obviously would be a difficult problem to solve and at the present an impossible one to secure agreement, because all of them have loyal supporters in great number and have developed efficient organizations, publish good journals and have attractive meetings. If some such plan as this could be carried out, the meetings of these large groups in four or five areas of the country could replace the annual Clinical Session of the A. M. A. The attendance would greatly exceed the one meeting now held, the House of Delegates could alternate their place of meeting and the message of the A. M. A. would reach the profession much more efficiently. It is a question, however, that deserves serious thought in the high councils of the A. M. A.

It seems to me that serious thought should also be given to the recent expansion of the activities of the American Medical Association. Its budget has multiplied many times to reach almost five million dollars for the current fiscal year. This expansion compares in proportion too closely to the federal government. Like the federal government, too, numerous bureaus have developed and expanded. The work of these groups has been uniformly good, we could not get along without them, but again from the federal government we should be warned by the power of bureaus entrenched in the security of large budgets.

The American Medical Association served us well on a relatively small amount of money until the notable fight against the socialistic Democratic Administrations made it necessary to assess each member annually to combat the approach of socialized medicine. Like most organizations the A. M. A. did not release this money when its objective had been accomplished, but now uses it in its expanded activities. It is a situation that should be kept under close observation.

The colleges have grown in strength and usefulness. Their influence on specialty practice and hos-

Presidential Address delivered before annual meeting of The Medical Society of Virginia, Richmond, October 17, 1956.

pital operation has been great and good. Unfortunately in their youth the standards for admission of members was not adequate, so that it seemed necessary to establish new requirements for specialty practice and thus the Boards were born. Again the standards of professional service received a boost and, as a result, there has been improvement in the residency programs and in the desire of young specialists to secure adequate training.

There are, however, two serious objections to the present system. The major one is the entire lack of control over the boards. They have grown up entirely independently, almost any group can form a board and the numerous ones now operating can establish requirements altogether independently and without regard to the effect on other boards. It seems to me that there should be an overall authority which would establish and regulate these boards as they now exist, and probably work to the end of having them absorbed by the colleges. If the requirements for fellowship in the colleges had been adequate in the begining it would not have been necessary to establish the boards. While the boards have set high standards for training, these very rules sometimes create false ideas in the minds of the young specialists. Some of them think that passing through a certain number of years in approved programs makes them well trained specialists. These men either fail to get the broad thorough knowledge of their profession or they fulfill the paper requirements without having the real experience which is necessary. This same objection applies to standardized educational programs in other fields.

Having now saturated the local, state and national markets, our gregarious physicians have become internationally minded with the result of a crop of new organizations, some good, some bad, associated particularly with the European and South American countries. Perhaps fortunately, the disturbances in Asia prevent the expansion there, but when international affairs are more settled it may be a fertile field for future foregatherings.

The small local groups are so numerous that it is utterly impossible for anyone to attend all of the meetings scheduled for him. This is particularly true in certain sections of Virginia where the private hospital system has developed. Our private hospitals have served the public efficiently and well, but in many ways they handicap the profession in general. Each one of necessity and policy must have several meetings every month, and attendance at these meetings naturally cuts down the attendance at the county society.

Public Relations

Our societies on all levels have become obsessed by the idea of improving Public Relations. It is true that our national economy has become so complicated that much explanation to the public is needed. All big industries have departments of Public Relations and the doctors are in hot pursuit. In business the reasons for such departments are to promote sales, and to explain or cover up certain faults. Again it seems to me our profession has gone over-board. We do have certain faults and limitations, we have made giant strides in eliminating many diseases and improving the condition of patients who cannot be cured, we have to a large degree been responsible for the prolongation of human life, we have promoted research which has accomplished many of these triumphs, but should we feel it necessary to spend enormous sums of money in telling the public about it all? Our pharmaceutical friends are willing contributors to these funds, but their very generosity increases the cost or at least prevents, to some extent, decrease in the cost of their products. I am sure that the individual physician who, after all, is the local, regional, and national society, could accomplish as much or more to promote good public relations at no cost at all. I doubt seriously the value of many radio and television programs and of much of the propaganda put out on many diseases, notably on cancer. The public and the doctors have organized societies on many special diseases. These societies have done much to help the victims, but they have also created false impressions of the relative importance of certain conditions. Thirty times as many people are injured and killed by automobiles as are damaged by poliomyelitis, yet the attempt at prevention and alleviation on the part of the public and the profession have been puny indeed. If we could create a public desire to prevent these accidents comparable to the desire to prevent cancer or poliomyelitis safer automobiles would be built, the laws regulating them would be enforced, and the drivers would proceed with real care. If these things were done, the reduction in suffering and loss of life would be tremendous.

Cost of Medical Care

The cost of medical care is a matter of great concern. It is natural that it has grown along with the changing value of the dollar and the increased cost of everything. However, as I have said before, I believe the doctors in this country could make material strides in reducing the present high costs. Among many other items we should consider the

wasteful use of all the antibiotics, the use of many expensive drugs when older and cheaper ones would serve the same purpose, the excessive demand for expensive laboratory procedures and x-ray examinations, the unnecessary admission of many patients to hospitals, and there are many others. The cost of Blue Cross hospitalization has steadily increased and has already reached a point where the premiums are too high for many people. It seems strange, but it is probably only human, that these same people, who will not pay for protection against illness, are able nevertheless to drive good automobiles and enjoy many other luxuries. The public should realize that the professional fees of the doctors have increased very little in comparison with the cost of living and play a very small part in that increase in the cost of medical care.

American Medical Education Foundation

There are very few occasions to adversely criticise the members of this Society. Unfortunately one is their response to the appeals of the American Medical Education Foundation. All of the money contributed to this fund goes to our medical schools and is a tremendous help in these days of expanding budgets. All of the administrative expenses are borne by the American Medical Association and the donor can designate the school to which his money should be sent. In Virginia our two schools receive almost $50,000.00 annually from this Foundation. It is sad to point out that only about 15% of our members contribute to it and the total of their gifts is only about $9,000.00. We should do a great deal more and I urge this for your earnest consideration.

Negro Members

For a number of years the question of admitting Negro physicians to membership in our society has been debated and last year we changed our Constitution so that they are now eligible. These people have always been our friends, many of them our devoted companions at various stages of our lives. In the State of Virginia their lives, happiness, and opportunities are more abundant than in almost any other location. In response to this, the reaction in the local societies has been variable, some societies have made the same change in their constitutions, others are indifferent, and still others have defeated it. It seems to me that the best interests of all would be served by the local societies following the lead of the State Society and accepting this new order. It is much more logical for the profession in Virginia to agree completely on this issue, than it is to have different rules in different localities. It seems to me not wise and not fair to accept them for membership in some localities and deny them that membership in other places.

Conclusions

In concluding these remarks I want to avoid misunderstandings as far as possible.

I have suggested expansion of the American Medical Association and at the same time guarding against its too great growth in power. This is not inconsistent. It might be compared to addition of states to the union, but attempting to limit the authority of the federal government.

I have recognized the value of medical societies in general but have suggested some limitation on continued expansion, because by too great distribution of our resources the important societies are weakened.

I have pointed out the value of new drugs, examinations, and treatments, but have suggested limiting their use because I think much of it is unnecessary.

I have deplored the large expenditures of money on Public Relations, but have suggested that individual physicians can, by their own efforts, more than make up for smaller budgets.

Finally I would again give words of praise for The Medical Society of Virginia. The members of this society have kept pace scientifically, have served their patients well, have good relations with their public and themselves, and yet have not gone into excesses of organization and activity.

I extend my heartfelt thanks to the members of the committees, the Council, and the Delegates for work well done. The work of our executive officers and their assistants has been excellent and to such a degree of efficiency that the work of your President is no longer arduous.

I appreciate more than I can express, the honor and the opportunity you have given me. I have enjoyed the contacts and experiences of this position, I regret my sins of commission and omission, I can assure you that our Society is in excellent condition, it is performing its functions soundly and well, all of us should be proud to be members of it, and I thank you for what you have done for me.

805 West Franklin Street

The Management of Acute Renal Insufficiency

HENRY G. MISHALANY, M.D.
B. W. HAYNES, JR., M.D.
W. ALLEN FULLER, M.D.
Richmond, Virginia

ACUTE renal tubular damage produces a clinical syndrome characterized by the rapid loss of renal excretory functions leading to acute renal insufficiency. It is of paramount importance that the management of this syndrome be directed along specific lines of therapy since therapy directly influences the clinical course. These patients do not often recover unless aided by the physician and may die if mismanaged[1].

General Considerations

The successful treatment of this injury is dependent upon its early recognition since failure to do so may result in over-hydration of the patient and the production of irreversible physiologic disturbances. Unfortunately, acute renal failure often develops during the course of other serious diseases or following severe injuries when the physician's attention is focused on the primary condition. Furthermore, it occurs with equal frequency in youth and in the aged, and not infrequently in those who have been in good health previously.

When a patient is observed to have either oliguria or anuria, the clinician should determine whether or not the patient has had recent blood transfusions; whether he has been in shock and for how long; whether he has taken any drug, poisonous mushrooms, sulfonamides or carbon tetrachloride. These modalities can produce renal impairment.

If the patient is hospitalized because of severe burns, crushing injuries, infection or black water fever, the causative factor of the renal failure may be apparent. On the other hand, oliguria and even anuria may be caused by mechanical or physiological disturbances in which there is no impairment of the renal tubules. Among these are renal stones and such conditions as gastroenteritis and hyperthermia, in which the patient has become depleted of sodium and chloride or is suffering from metabolic acidosis. In such cases, correction of the underlying pathologic state usually will reestablish an adequate urinary output.

There is ample evidence that man can survive for several weeks with little or no renal function[10,11]. Since over half of the deaths in acute tubular damage occur within the first week of the disease, the aim of therapy should be directed toward protection of the patient until the damaged renal tubules are sufficiently recovered to permit diuresis[3].

From the Medical College of Virginia. Dr. Mishalany is now at Memorial Hospital, Charlston, West Virginia.
Received for publication August 5, 1955.

Evaluation of the Patient

a. The extent of injuries or the duration and nature of the illness and the state of hydration of the patient are all valuable clinical indices. The patient's past history, especially in reference to the cardiac and renal systems, provides further helpful information. Previously damaged kidneys obviously have much less chance of withstanding serious insults.

The blood pressure level is very important, since shock, if allowed to persist, may produce or contribute to renal tubular injury. Nausea and vomiting, which may produce dehydration and shock, and electrolyte imbalance must be assessed.

b. *Fluid Output:* The volume of all the possible sources of fluids lost from the body should be recorded daily. These fluid losses include urinary output, vomitus, gastric and intestinal fluids obtained through suction or fistulae, insensible loss, perspiration and an estimate of fluid lost in diarrheic stools. When feasible, the patient should be weighed daily.

The urinary output can be determined more accurately when an indwelling catheter is used, for this minimizes errors in collection and measurement. During the oliguric and early diuretic phase, the hourly output of urine as well as the total for each 24 hours is recorded.

The insensible loss of water varies with the season of the year, the patient's temperature, and the body weight. Such loss is estimated to be 12 to 17 cubic centimeters of water per kilo of body weight per 24 hours for a patient who is lying quietly in bed. Seven per cent is added for every degree of temperature above normal.

The sodium chloride content of the sweat is 0.2-0.5 per cent and this should be taken into account when sweating is excessive. Bland gives the follow-

ing table of fluid and electrolyte losses due to fever and perspiration[13]:

	24 hour water (cc.)	24 hour chlorides (mEq.)
Absence of fever and perspiration	1000	0
Obvious fever and perspiration	1500-1800	40
Marked fever and perspiration requiring change of linen and pajamas	2000-2500	80

c. *Laboratory Studies:* The potassium, sodium, chloride, and CO_2 levels in the blood serum, the BUN, and the hemoglobin should be determined daily. Also of value is the determination of specific gravity of the urine and its examination for red blood cells and hemoglobin. These analyses enable an accurate evaluation of the electrolyte abnormality and provide guide-posts to adequacy of replacement therapy.

Treatment

a. *Fluid Therapy:* Shock and deficit in blood volume should be corrected as soon as possible by intravenous colloids, plasma or blood, so the patient's blood pressure and blood volume approximate as nearly as possible the normal levels.

If oliguria or anuria is due to dehydration from vomiting, proper fluid replacement by intravenous therapy and correction of the electrolyte picture should reestablish an adequate urinary output.

If acute renal failure persists and the patient is vomiting, fluids should be given intravenously and gastric suction instituted. The volume of fluids administered each day should be equal to the total fluid losses of the previous day. These fluids losses include the 24-hour output of urine, gastric and intestinal juices lost through suction or vomitus or fistulas and an estimate of water lost through perspiration and in diarrheic stools. No additional fluids should be administered. Intravenous fluid therapy may be given through a polyethlyene catheter inserted into either the saphenous or antecubital vein. A fat emulsion for intravenous use is under evaluation. This solution provides a large number of calories.

If sweating is excessive, sodium chloride should be replaced in the proportions given above. Appropriate vitamin therapy is given, usually 3-4 cc. of vitamin B and 500 mg. vitamin C daily.

The gastric juice and drainage from fistulas should be analyzed as well as measured so the electrolyte losses may be replaced more accurately. However, when this is not possible, for each liter of gastric contents lost, the following formula was found to be satisfactory for replacement: (a) 900 cc. of normal saline, (b) one gram of potassium chloride to be added only if the serum potassium is below 4.0 mEq./1., (c) 100 cc. of 5% glucose in water. Intestinal fluid may be satisfactorily replaced as follows: For every liter lost (a) 600 cc. of normal saline, (b) one gram of potassium chloride to be added if the serum potassium is below 4.0 mEq./1., (c) 300 cc. of 1/6 Molar sodium lactate, (d) make to one liter with 5% glucose in water.

Several pharmaceutical companies have infusion solutions with the proper chemical composition to replace gastric, biliary, pancreatic, and intestinal losses. Although these solutions may be expeditious, more specific therapy may be indicated in acute renal failure.

A certain amount of endogenous water is released in the body as water of oxidation resulting from the breakdown of tissue. In a starving 70 kilogram man, this amount would approximate 470 cc. daily[3]. Straus[3] subtracts this amount of water from the insensible water loss when administering fluids to bad risk cardiac cases. It is better in oliguric and anuric patients to err on the side of giving little fluid, rather than take the chance of overloading them.

Oral feedings should be started as soon as possible. This is not only the most physiologic form of therapy, but it minimizes technical difficulties and makes possible a higher caloric intake.

b. *Nutritional Therapy:* Sufficient calories should be supplied to prevent depletion of body proteins and starvation ketosis. Protein catabolism elevates nitrogenous products and potassium in the body fluids to dangerously high levels. The high caloric-low protein diet has been shown[7,8] to lower the BUN and to reduce the daily urea excretion in the urine to as little as 2 1/2 grams or even less. This diet is preferably given by mouth but if for any reason this is not feasible, an indwelling nasogastric polyethylene tube may be used. This tube is easy to pass and is well tolerated in the average case. Kolf[7] has offered practical suggestions for preparing such diets:

Emulsion for Intragastric Drip (Bull, Joekes and Lowe) (7) (16)

Glucose 400 grams	Continuous drip, 1 liter contains
Peanut Oil 100 grams	2500 calories, 25 cc. of tween 80
Acacia q. s. to emulsify usually 25 grams	may be added (Grollman)
Water to one liter	Lipo Mul-oral available from
Vitamins	Upjohn Company (Stare)

Butter Soup (Borst) [7]

Sugar 150 grams	1775 calories, 2 grams of protein divided over 6 portions, each feeding will contain 300 calories. Vitamins preferably parenterally
Salt free butter 150 grams	
Flour q. s. add to make emulsion, up to 20 grams	
Water 300 grams	
Coffee extract	

Kolff advises continuing the diet even if the patient vomits moderately. These diets should be followed even though the potassium and BUN levels are not lowered immediately because of conditions which increase the metabolic rate and breakdown of tissue[7].

Persistent vomiting, often present in the early oliguric phase, may require abandonment of the oral route and the institution of parenteral feeding. The patient should not be replaced on oral feedings until vomiting has stopped.

G. I. complications may occur and be partly related to the oral feedings. Diarrhea may complicate the late oliguric or diuretic phase and lead to underestimation of the fluid output. Kaopectate and paregoric are helpful. The diarrhea tends to subside with improvements in renal function. Diarrhea may also be secondary to the high fat content of certain feeding formulae. This should be remedied by elevation of the carbohydrate component and simultaneous lowering of the fat content of the formulae.

Abdominal distention can be another disturbing complication. If it occurs in the presence of gastrointestinal suction, sodium or potassium deficiency may be the incriminating factor. This should be evaluated and treated promptly. When abdominal distention occurs during the course of oral feedings, these should be stopped and the patient started on gastrointestinal suction and parenteral fluid therapy.

In conjunction with nutritional therapy aimed to minimize protein breakdown, efforts should be directed to prevent and control infection. Penicillin would seem to be the agent of choice. Caution should be exercised in using antibiotics excreted by the kidneys, such as streptomycin and aureomycin. Starvation or any unnecessary surgical procedure such as renal decapsulation are harmful and add to tissue catabolism. Even peritoneal lavage, artificial kidney dialysis and transfusion of stored blood are cited by Borst[8] to be harmful in this respect.

c. *Electrolyte Therapy:*

1. *The Problem of Body Potassium:* Hypopostassemia is a relatively infrequent problem but may result from a high caloric, low protein, low potassium diet in the presence of polyuria and a urine with low fixed specific gravity. It can be managed by supplementary potassium salts. Conversely, hyperpotassemia is a serious frequent clinical problem and ranks with pulmonary edema as a direct cause of death from acute renal insufficiency. The cardiac and neuromuscular signs of potassium intoxication are late manifestations and their absence gives a false sense of security if the clinician is relying on them alone. Serial EKG's, serum potassium and sodium determinations, are the only way to predict a rising level of potassium ion[1].

Despite all efforts to minimize protein breakdown and rigid adherence to sound principles of therapy, there will be a certain number of cases in which the serum potassium progressively increases. In that event, any rise in serum potassium should be combated vigorously with resins or dialysis.

Since the artificial kidney is not generally available and peritoneal lavage is not unanimously accepted, resins have become useful as a safe and effective way of controlling a progressive hyperpotassemia. The resins are insoluble, inert, non-irritating compounds whose specific therapeutic action is to bind cations such as sodium and potassium, therefore reducing their concentration in the body fluids. In an alkaline medium such as found in the small and large intestines, they exchange their hydrogen ions with sodium or potassium cations. The disposal of the resins by way of the feces will affect the removal of the resin-bound cations.

Evans institutes resin therapy as soon as the potassium level reaches 6 mEq. per liter and discontinues it when it falls below 5 mEq. per liter. The resins used are sodium sulphonic and not ammonium sulphonic. This is advised because "exchange with sodium resins is more rapid and sodium is more innocuous than ammonia in anuric patients.

The ammonia is converted to urea in the liver and will, therefore, raise the already high blood urea level. In addition, acidosis, which is almost invariable in these patients, is increased because a basic ion is exchanged, in effect for neutral urea. The small amount of sodium given up by a sodium resin is relatively harmless and does not appear to cause edema or hypertension". The resins are administered orally, 15 grams three to four times daily. When the patient is vomiting, the resins are given as a retention enema (30 grams) and should remain in the colon for at least 18 hours. The resins continue to take up potassium in exchange for sodium throughout the G. I. tract but more so in the distal parts. The most satisfactory way of treatment is the oral route.

Often patients are referred with a very high serum potassium level. In these acute cases, the administration of insulin, glucose and calcium may cause a critical transfer of potassium from plasma to glycogen stores until the resins have had time to effect cation transfer[15].

2. *Replacement of Sodium Chloride:* The blood level of sodium tends to fall in the oliguric phase. The administration of sodium-free fluids to totally replace fluid ouput was frequently associated with hyponatremia[5]. Mild hyponatremia may be associated with hyperpotassemia in many instances; conversely, hypernatremia is compatible with a normal serum potassium. Since attempts to correct hyponatremia with hypertonic sodium solutions have often led to fatal cardiac failure, it would seem that correction of moderate serum sodium depletion should not be attempted in the oliguric phase. If correction of hyponatremia seems desirable, it should be done by water restriction. In the diuretic phase, however, there is a tendency to lose an excessive amount of sodium chloride and water in the urine. Swann and Merrill[1] have shown that this loss does not entirely represent an inability on the part of the kidneys to conserve salt and water. Failure to recognize this fact and attempting to replace losses increases and perpetuates the diuresis[1]. Replacement of sodium, chloride, and water losses in the diuretic phase should be accomplished only if the patient is not over-hydrated as judged by tissue and pulmonary edema and mild dyspnea. These losses are evident by a falling serum sodium and an increased quantity of sodium in the urine above the normal 150-200 mEq. per 24 hours. Alterations in consciousness, coma, and convulsions in the oliguric phase may be associated with excessive administration of water and sodium chloride. These symptoms usually abate after proper fluid and electrolyte adjustment.

3. *Correction of Blood Calcium and Magnesium:* These cations are relatively stable in acute renal insufficiency. Tetany and convulsions due to hypocalcemia occur especially if the concomitant acidosis is corrected suddenly. The administration of calcium gluconate, 1-2 grams, will be helpful in combating tetany. Increase in serum magnesium not infrequently follows prolonged renal failure. The increase usually is not excessive unless magnesium sulfate has been used as a sedative. Under such circumstances, hypermagnessemia of clinical significance may occur[14].

4. *The Control of Acidosis:* Mild to moderate degrees of acidosis can be disregarded because therapy can only change the bicarbonate concentration of the blood without basically altering the cause of the acidosis. An acidosis in the range of 13-15 mEq. per liter is tolerated in anuria since the mechanism is a compensatory one. Sodium bicarbonate or lactate can be added to the infusion or oral feedings when necessary.

d. *The Importance of Blood Urea:* The blood urea nitrogen and creatinine rise during the oliguric phase; however, they do not carry the same prognostic significance as a high serum potassium[5,7]. Appreciably high levels of blood urea are well tolerated by many patients while others die with a normal BUN.

A high caloric intake and control of infection are helpful in lowering the BUN for reasons discussed previously.

e. *The Treatment of Anemia:* Anemia develops rapidly and does not progress, in the great majority of cases, beyond a hematocrit of 20-25%, even though the oliguria persists and the BUN continues to rise. Since many observers have remarked that anemia is well tolerated by patients suffering from acute renal failure[1], it seems hardly justifiable to transfuse these patients during the oliguric and early polyuric phases, as this may lead to pulmonary congestion.

In a well controlled patient who has a significant anemia, the administration of small amounts of blood at repeated intervals may be justified.

f. *The Recognition and Treatment of Cardiac Complications:* (1) Elevation of the blood pressure, mainly systolic, with an increase in the pulse pressure, occurs with moderate frequency. There is no specific therapy. Values will return to normal with systemic improvement. (2) Pulmonary edema with or without peripheral edema should be suspected if dyspnea and cardiac enlargement become prominent. Basilar rales are a later finding. There is much similarity between the signs of cardiac dysfunction in acute oliguria with those of primary congestive heart failure[12]. In the oliguric phase, vigorous attempts to correct mild sodium deficiency and acidosis are likely to precipitate pulmonary edema. Likewise, repeated transfusions in the oliguric phase are factors in the development of pulmonary congestion. Hypertension and hypernatremia may or may not be etiologic factors in the production of pulmonary edema. The therapy of congestive heart failure secondary to acute renal insufficiency is similar to the management of primary cardiac decompensation. The diuretic effect of digitalis may be disappointing because of the acute tubular renal damage. (3)

Cardiac irregularities and defects in conduction may follow a rising serum potassium. This was discussed previously.

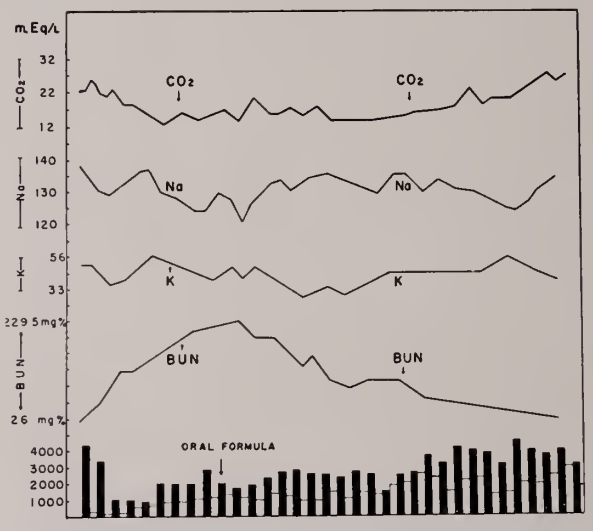
The Artificial Kidney

Some patients will develop a high potassium level or accumulate dangerously high levels of toxic metabolites despite all efforts. In these instances, the facilities of the artificial kidney may be life saving.

Case Report

The following case, treated on the Division of Thoracic and Cardiovascular Surgery, Medical College of Virginia Hospital, will illustrate some of the principles of treatment.

E.B., No. B 174825, a 51 year old colored male, was admitted to St. Philip Hospital about one hour following a bullet injury to the left groin. The blood pressure was 80/? and clinically the patient was in shock. The patient was conscious and it was evident from his clothes that he had lost a substantial amount of blood. He was given 500 cc. of blood and taken to the operating room where repair of the left femoral artery was done. During the operative procedure, the patient's systolic blood pressure was maintained between 110 and 80 and an additional 2000 cc. of blood was given. The immediate post-operative urine output was 5 to 7 cc. per hour. A blood volume determination revealed that a 2000 cc. deficit was present. The deficit was replaced. During the last transfusion the patient had a moderate chill and temperature elevation. The urine contained many red blood cells and supernatant hemoglobin. The urine output was 173 cc. for the second 24 hours post-operatively. Therapy was directed toward replacement of urinary output and insensible loss; the latter was calculated to be approximately 900 cc. This was given as 10% glucose in water I. V. The BUN rose sharply in the next nine days to a level of 220 mgm.%. The creatinine and blood pressure followed a similar pattern. The patient became drowsy and developed hiccoughs, nausea and vomiting. The potassium remained normal (see graph). On the 9th day post-operatively, oral therapy was begun with a high caloric, high fat, low sodium and protein diet since nausea and vomiting had largely disappeared. (Composition in accompanying table). The BUN and creatinine gradually declined, and his alertness returned. His urinary output slowly but gradually increased. It was 1400 cc. the day the oral feedings were started, and 2300 cc. on the 21st day post-operatively. Part of the operative wound broke-down and healed by secondary intention. The patient developed two small lung abscesses in the right lower lung. These were managed and responded to conservative and antibiotic therapy. His anemia (8.3 grams) was treated at the end of his hospitalization by a transfusion of 250 cc. of blood, and hematinics. The patient was allowed to leave the hospital with a hemoglobin of 10.2 grams. All other biochemical values returned to normal before discharge.



Graph—This graph shows the electrolyte and blood urea nitrogen values during the time of the patient's hospitalization. The black columns at the bottom refers to the daily intake of fluids, and the white columns at the bottom to the daily urinary output in cubic centimeters. Note the steady level of the serum potassium and the decline of the elevated blood urea nitrogen after the institution of the high caloric, high carbohydrate, high fat and low protein formula.

E. B.	Composition of Special Feedings							
Date Began	9/15/53	9/18	9/22	9/25	9/26	10/2	10/4	10/10
Total Pro. (gm.)	1	3	.....	15	.....	50	100	125
Total Fat (gm.)	53	117	.....	115	.....	133	145	115
Total CHO (gm.)	180	263	.....	255	.....	300	327	310
Total Calories	1,200	2,100	.....	2,100	.....	2,600	3,000	.....
Volume (c.c.)	1,500	.....	.....	.....	.....	3,000	.....	.....
Total Na (gm.)	0.07	0.09	.....	1.58	0.29	0.27	0.42	2.66
Total K (gm.)	0.25	0.35	4.54	4.53	.....	4.48	4.51	4.46

Plus Vitamins A, D, B_1, B_2, NA, C added in quantities 3 times the recommended dose of National Research Council.

Composition of oral feeding formula given to patient.

This was prepared by the Research Diet Kitchen of the Medical College of Virginia.

Discussion

This patient represents a case of acute tubular renal damage most likely secondary to a transfusion reaction. The patient was initially treated by whole blood and intravenous fluids to combat shock and deficit in blood volume. Intravenous fluid therapy was continued during the vomiting phase. Oral feedings were begun as soon as possible. The accompanying graphs would suggest that the high caloric and low protein content of the feedings were instrumental in lowering the BUN. More important, this diet probably was instrumental in the stable level of serum potassium.

Summary

1. Acute tubular renal insufficiency is a frequent disease entity.

2. It is important to evaluate the patient clinically with special reference to the state of hydration, blood pressure, cardiac status and previous renal disease, to record the daily urinary output with an indwelling catheter, and to obtain reliable blood chemistries.

3. Conservative rather than excessive administration of fluids should be the therapeutic principle.

4. High caloric, low protein and low sodium feedings can materially affect rising toxic metabolites.

5. Potassium is the significant serum cation. The management of hyperpotassemia is of critical importance and is discussed in some detail.

6. Cardiac, G. I., and hematologic complications can be detrimental and should receive serious therapeutic consideration. A case of acute renal tubular insufficiency is presented.

We would like to thank Dr. Arnold M. Salzberg for his editorial assistance.

References

1. Swan, R. C., and Merrill, J. P.: The Clinical Course of Acute Renal Failure, Medicine, 32: 215, 1953.
2. Smith, H.: The Kidney, Oxford University Press, New York, 1951.
3. Strauss, M. B.: Therapeutic Considerations in Acute Renal Impairment, Bull. of New England M. Center, XI: 247, 1949.
4. Strauss, M. B.: Acute Renal Insufficiency Due to Lower Nephron Nephrosis, New England J. Med., 239: 693 and 761, 1948.
5. Gamble, J. L.: Chemical Anatomy, Physiology and Pathology of Extracellular Fluid, Harvard Univ. Press, Cambridge, Mass., 1947.
6. Evans, B. M. *et al.*: Ion Exchange Resins in the Treatment of Anemia, Lancet 2: 791, 1953.
7. Kolf, W. J.: Forced High Caloric, Low Protein Diet and the Treatment of Uremia, Am. J. Med., XII: 667-679, 1952.
8. Borst, J. G.: Protein Katabolism in Uremia—Effects of Protein Free Diet, Infections and Blood Transfusions, Lancet, 254: 824, 1948.
9. Elkinton, J. R. *et. al.*: The Treatment of Potassium Retention in Anuria with Cation Exchange Resin (Preliminary Report), Am. J. M. Sc., 220: 574, 1950.
10. Fontaine, A. W.: Suppression of Urine for 25 Days, Virginia M. Monthly, I: 4-7, 1874.
11. Miningham, W. D.: Case of Total Anuria of 24 Days Followed by Perfect Recovery, J. M. Soc. New Jersey, 5: 566, 1906.
12. Freidberg, C. K.: Congestive Heart Failure of Renal Origin, Am. J. Med., 9: 164, 1950.
13. Bland, J. H.: The Clinical Use of Fluid and Electrolytes, W. B. Saunders Co., 1952.
14. Haynes, B. W.: Magnesium Metabolism in Surgical Patients, Ann. Surg., 36: 659, 1952.
15. Van Slyke, D. D.: Renal Tubular Failure of Shock and Nephritis, Ann. Int. Med., 41: 709, 1954.
16. Bull, G. M. *et. al.*: Conservative Treatment of Anuric Uremia, Lancet, 2: 229, 1949.

If you are to find rewarding satisfaction in your work, if your life is to be rich and purposeful and crowned with high achievement, it is important you continue to be a growing person. Education is a continuing process. It does not end with the termination of your schooling. Education continues from the beginning of life to the end of life, and balanced growth throughout one's entire life is important for every individual.

—Henry T. Maschal

Intra-Uterine Rupture of Meckel's Diverticulum With Atresia of the Ileum

M. K. KING, M.D.
H. W. WOOD, M.D.
L. M. GALBRAITH, M.D.
W. F. MURPHY, M.D.
Norfolk, Virginia

THE case described below presents the following rare combination of abnormalities: (1) atresia of the ileum, (2) intra-uterine rupture of a Meckel's diverticulum, (3) meconium peritonitis present at birth and (4) an encysted mass of meconium outside the bowel.

Atresia

The term atresia, means a complete block and is an uncommon malformation of developmental origin. The embryologic events leading up to this condition take place between the fifth and tenth weeks of fetal life. Ladd and Gross[1] state that prior to the fifth week of fetal life, the intestine has a well-defined lumen lined with epithelium. Shortly after the fifth week, this epithelium proliferates sufficiently to completely obliterate the lumen from the pylorus to the ileocecal valve. The intestine is then in a solid state. Soon thereafter, vacuoles appear in the epithelial cells and by coalescence the lumen of the bowel is re-established. An arrest in development during the second and third month of fetal life thus results in atresia or stenosis of the bowel. In the less common form of intestinal atresia, an internal diaphragm or veil is found which blocks the lumen. In the more common form, the bowel ends as a blind-sac. Proximal to the obstruction, the intestine in intensely dilated, reaching three or four centimeters in diameter. Distal to the obstruction, the intestine is very small, collapsed, and contains neither gas or meconium. This portion of the bowel will measure no more than four to six millimeters in diameter. There may be a thread-like band between the distal and proximal loops of bowel, or there may be a complete discontinuity of the bowel. Multiple atresia may exist[2].

Meckel's Diverticulum

Meckel's diverticulum occurs in two to three per cent of all cases coming to autopsy[3] and it has been our experience that the incidence is slightly higher than this in the operating room. Meckel's diverticulum represents that portion of the vitelline duct communicating with the ileum. It may be connected with the umbilicus by a cord of tissue which is a remnant of the primitive yolk-stalk. Meckel's diverticulum may be associated with hemorrhage, inflammation, intestinal obstruction or intussusception, but intra-uterine rupture is an extremely rare phenomenon[9].

Meconium Peritonitis

Meconium peritonitis is a non-bacterial perintonitis occurring during intra-uterine life as a result of abnormal communication between the bowel and the peritoneal cavity[4]. Meconium, according to Boykin, is found at about the third month of gestation. It is sterile when formed and remains so from three-to-six hours after birth, after which time it is usually contaminated by bacterial growth in the intestinal tract. When meconium enters the peritoneal cavity, the ensuing perintonitis produces dense adhesions. The involved loops of bowel may become densely adherent to the escaped meconium and the meconium mass may become encysted and calcified. These calcified areas can be seen on the film of the abdomen as irregular calcific plaques. The calcific plaques are formed by precipitation of tissue fluid from the broken down fatty constituents. Litten[5] believes that these calcifications may occur within twenty-four hours after the onset of perintonitis. Over one-hundred cases of meconium peritonitis have been reported in the literature, but most of these have been from autopsy material. Within the past few years, a few cases have been recognized, operated upon and have survived[6,7,8]. About fifty per cent of the reported cases have been associated with organic obstruction such as is produced by stenosis, atresia, congenital bands, volvulus, meconium ileus and hernia. Most of the remainder have been related to trauma, ulcer, Meckel's diverticulum, the appendix and congenital diverticula; while in a few cases, no definite etiology was found[9,10,11].

Case Report

A five-pound eleven ounce premature infant was delivered with low forceps after an otherwise nor-

Received for publication July 10, 1955.

mal labor. The mother was gravida two, parity one, and this pregnancy had been essentially uneventful except that the onset of labor was approximately one-month prior to the expected date of confinement. Shortly after birth, abdominal distention was noted in the child and a pediatrician was called in consultation. Five-hours after birth, the child had passed no meconium and there had been no vomiting. The abdomen was quite markedly distended, the skin was very tight and the superficial veins of the abdomen were distended. A lavage tube was passed and green, bile-stained fluid was obtained. A rectal tube was passed and neither gas or meconium were noted. A tentative diagnosis was made of intestinal obstruction from some unknown congenital anomaly.

X-ray films of the abdomen and chest were made six-hours after birth in both the erect and inverted positions (Figure 1). These studies reveal that



Fig. 1.—Gas is present in the stomach and small bowel and absent in the colon. Small irregular calcific plaques are seen just above the wing of the right ilium.

gas was present in the stomach and upper small bowel, but none was noted in the colon. Just above the wing of the right ilium, several small irregular areas of calcification were seen. The chest was essentially normal. The radiological impression was, "intestinal obstruction, probably due to meconium ileus".

The child was given 60 cc. of whole blood intravenously, and nine-hours after birth, an exploratory operation was done.

Operative Report

Pre-Operative Diagnosis—Intestinal Obstruction

Findings: The abdomen was moderately distended. There was evidence of sterile peritonitis

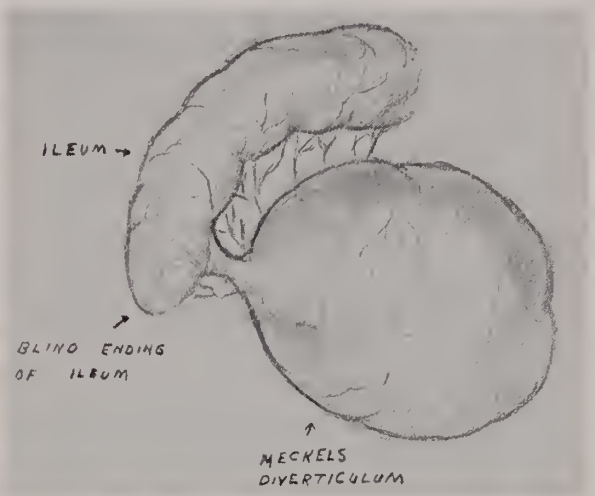


Fig. 2.—The Meckel's diverticulum shown above has been reconstructed. The sac was attached to the anterior abdominal wall over a wide surface where it has ruptured. It was therefore necessary to evacuate the sac before freeing and removing it. The stalk-like attachment to the terminal ileum was patent. The terminal ileum ended blindly just below this stalk with no evidence of any attachment to the cecum. The terminal ileum was greatly distended and necrotic in some areas, requiring a fairly wide resection.

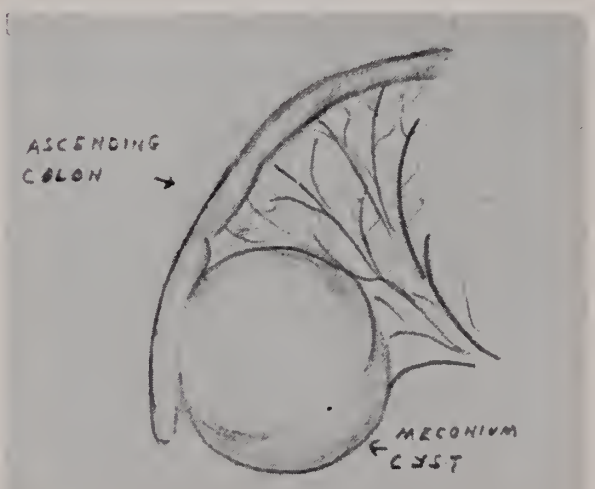


Fig. 3.—The nature of the cystic mass shown above was uncertain at first. It appeared to be attached to the very small ascending colon but upon opening it, no communication was found. It was filled with meconium. It appears most probable that when the Meckel's diverticulum ruptured a portion of the meconium became encysted, as represented by this mass. A portion of the ascending colon together with this mass was resected.

apparently originating from a ruptured Meckel's diverticulum. The ileum was greatly distended and ended in a blind pouch just distal to the stalk of the

Meckel's diverticulum. The Meckel's diverticulum was partially necrotic and was attached over a wide portion of the anterior abdominal wall so that it was impossible to open the abdomen on the right side without entering the diverticulum sac (Figure 2). The ascending colon was very small and ended blind at the proximal end (Figure 3). There was no evidence of an appendix. The colon contained no meconium. Attached to the wall of the ascending colon was a cyst-like mass about two-and-one-half centimeters in diameter filled with meconium, which had no communication with either the large or the small bowel. It s assumed that this was a mass of meconium which ruptured from the Meckel's diverticulum and became encysted. The remainder of the abdominal exploration was negative.

Operation: The abdomen was entered through a right rectus incision and the meconium aspirated from the ruptured Meckel's diverticulum. The diverticulum was then freed and brought to the outside. The terminal portion of the ileum together with the diverticulum was removed. The large bowel was divided just above the meconium cyst. Saline injected into the open end of the ascending colon passed readily throughout the remainder of the large bowel. The open end of the large bowel was then doubly ligated with fine silk after the manner used in doing an appendectomy, since it was impossible to invert the end (Figure 4). It was necessary to remove a

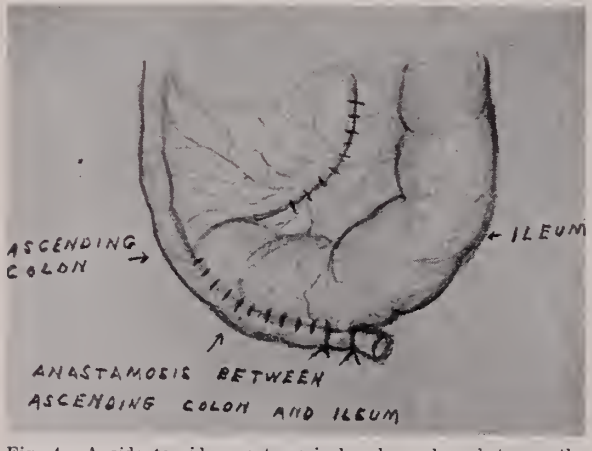


Fig. 4.--A side to side anastomosis has been done between the ascending colon and the terminal ileum. It was impossible to invert the end of the ascending colon so two silk ligatures were applied somewhat similar to the manner of treating an appendix stump.
The anastomosis had been done with a single row of interrupted silk.

total of approximately 20 to 25 centimeters of ileum in order to reach healthy, viable bowel. A side to side anastomosis was then done between the ileum and ascending colon using a single row of interrupted fine silk. The abdomen was closed in layers, using fine silk throughout.

Additional Note: The meconium cyst attached to the ascending colon was opened in the operating room. This portion of the specimen together with the small segment of ascending colon apparently failed to reach the pathological laboratory.

Post-Operative Diagnosis:

(1) Atresia of Terminal Ileum
(2) Ruptured Meckel's Diverticulum
(3) Meconium Peritonitis
(4) Meconium Cyst.

Post-Operative Course

On the day following operation, meconium stools were passed through the anus. The patient received Wangensteen suction, oxygen, antibiotics, intravenous fluids and such supportive treatment as appeared to be indicated by the attending pediatrician. His condition remained very good for the first three days and on the fourth day, a Starlac formula was added. Shortly thereafter, green stools were noted. In spite of the bowel movements, the abdomen remained quite distended and some yellowish discharge appeared from the incision. A culture of this material revealed B. coli. Feedings were stopped and gastric suction was again instituted. The drainage from the abdominal wound became more pronounced and a fecal fistula developed. The child became progressively worse and expired on the ninth day of life. An autopsy could not be obtained.

The technical difficulties in performing an anastomosis of the bowel in this type of case are almost insurmountable. In the future, such cases will be treated by exteriorization of the two ends of the bowel as recommended by Gross.

Summary

A case is presented in which an unusual combination of anomalies existed at birth: (1) atresia of the ileum, (2) ruptured Meckel's diverticulum, (3) meconium peritonitis, and (4) meconium cyst. It is believed that the technical difficulties involved in doing a primary anastomosis in this type of case renders this method of treatment unsuitable and an exteriorization procedure such as described by Gross is thought to be a preferable method of treatment.

Bibliography

1. Ladd, W. E., and Gross, R. E.: Abdominal Surgery in Infancy and Childhood, W. B. Saunders Company, Philadelphia, 19.
2. Gross, R. E.: The Surgery of Infancy and Childhood, W. B. Saunders Company, Philadelphia and London, 1953.
3. Gray, H.: Anatomy of The Human Body. Lea & Febiger, Philadelphia, 1942.
4. Boykin, W. C.: Meconium Peritonitis from Spon-

taneous Perforation of the Ileum in Utero, Arch. Path., 9:1164-1183, June, 1930.

5a. Rudnew, W.: Ueber die Spontanen Darmrupturen bei Foenten und Neugeborenen, Basel, 1915, Friedrich Reinhardt, 55, P. 8.

b. Litten: Cited by Rudnew.

6. Doyle, C. R.: Diagnosis and Treatment of Meconium Peritonitis, Southern M. J., 44: 358-360, April, 1951.

7. Agerty, H. A., Ziserman, A. J., and Shollenberger, C. L.: Cited by Bendel.

8. Bendel, W. L., Jr., and Michel, M. A., Jr.: Meconium Peritonitis, Surgery, 34: 321, August, 1953.

9. Genersich, A.: Bachfellentzundung beim Neugeborenen infolge von Perforation des Ileums, Virchows, Arch. F. Path. Anat., 126: 485, 1891.

10. Orth: Cited by Genersich.

11. Low, J. R., Cooper, G. Jr., and Cosley, L. Jr.: Meconium Peritonitis, Surgery, 26: 223, August, 1949.

12. Rosza, S., and Gross, R. J.: Intrauterine Perforation of Meckel's Diverticulum. Am. J. Roentgenol, Radium Therapy and Nuclear Medicine, 69: 944, June, 1953.

Wainwright Building.

"Little Black Button"

When a person's hearing begins to fade, it doesn't necessarily mean he'll end up wearing "a little black button" in his ear, according to an article in the October Today's Health, published by the American Medical Association.

Howard A. Carter, director of biophysical investigation for the A.M.A.'s Council on Physical Medicine and Rehabiliation, said there are a number of facilities available for the several million Americans who have some degree of hearing loss. The first step when hearing begins to fade is to consult an otologist or ear specialist. He can find the extent and cause of hearing loss and decide whether medicine, surgery, hearing aids or lipreading instruction will help.

For most persons, the loss is only temporary and is caused by impacted wax, infection, drugs, or infectious diseases such as mumps or a "cold." Any of which can be treated by the specialist. For others surgery will help. While approximately 15 million persons suffer some degree of hearing loss, about four million actually need hearing aids. However, only about one million now wear them. The rest refuse because of "pride or vanity, the first cost is too high, the upkeep expense is too great or the instrument is a nuisance to carry around."

With the advent of the transistor hearing aid, the hard of hearing person no longer needs to fear the "little black button." The transistor is a substitute for a vacuum tube. The transistor hearing aid costs considerably less to operate than the vacuum type —about 10 cents a week for batteries instead of a dollar. It is much smaller and can even be incorporated into the enlarged frames of eyeglasses. Others are made of flesh-colored plastic and are small. Women may use various types of jewelry to disguise the instrument, or it may be hidden in the hair.

When the ear specialist finds that a patient needs a hearing aid, he may send the patient to one of the 134 hearing rehabilitation clinics in this country or Canada. Most of these centers have a physician or a committee of physicians as medical directors. They make careful examinations and advise about amplification by hearing aid. They do not sell the instruments but refer patients to hearing aid leaders who actually sell and service them. In difficult cases the physicians sometimes recommend that the patients take lipreading courses, taught by trained speech experts at the centers, to supplement the hearing aid.

Information about hearing clinics may be obtained by writing to the Audiology Foundation, Box 21, Glenview, Ill.

Eye Damage by Tobacco

H. S. HEDGES, M.D.
Charlottesville, Va.

THE tobacco controversy, now being carried on in both the lay and medical press, is very interesting to me. I am just a practicing physician in a small city, have never done any experimental work on the question, and know very well that the following brief statements contain no truth that has not been fully known by most of our doctors for over a hundred years. For I find the first reference to this subject by Beer[1], in 1792; and, again, a long note by the great Scotchman, MacKenzie[2], in 1840; and, as far back as 1896, our honored and beloved Dr. De Schweinitz[3], in his monograph on *Toxic Amblyopia*, gives forty pages and a bibliography of over one hundred medical articles on this (to me) interesting question.

We all know full well that there are thousands of tobacco smokers who have used the weed more or less constantly for a long life-time, with no apparent physical injury except the formation of a craving for the drug that only continued use will satisfy. But I do not think anyone can question the fact that the alluring advertisements of our great tobacco firms are making, or rather have already made us a nation of slaves to the cigarette. I am always provoked when I see the slogan "Take a _____ to get a lift." They would not need the lift if they had not already been smoking. The picture is exactly like that of the opium addict (only, of course, on a far less damaging scale) to whom a hypodermic of morphine will in a few moments give a "lift" from the addict's hell to his heaven. We all know, also, that there is a vast difference between individuals as to their sensitivity to a given drug, and no one can predict in a particular case just what the reaction will be. One person can chew ivy with impunity; another will be miserably sick after passing through the smoke from a fire in which the vine is burning. My mother had a rather delicate digestion all her life. A handful of peanuts at bedtime was one of her favorite delicacies. I know a big, strong, young man whom a quarter of a peanut will make deathly sick—with violent nausea, vomiting, headache and prostration; and a small bit of peanut-fed Smithfield ham, which most of us think is the best that can be found, will have the same effect.

Presented at Annual Meeting of Virginia Society of Ophthalmology and Otolaryngology, May 7, 1955.
Received for publication July 27, 1955.

Now, I want to state a few simple *facts*, and let him who will draw his own conclusions.

Dr. Harvey Haag, Professor of Pharmacology, at the Medical College of Virginia, in Richmond, makes the following statements: (1) The tobacco in the average cigarette weighs one gram and contains about 22 milligrams of nicotine. (2) The smoke in one cigarette averages 3 milligrams of nicotine. (3) The fatal dose of nicotine for a 150 pound man is from 60 to 120 milligrams; so the smoke alone from a pack of 20 cigarettes contains enough poison, if given intravenously to kill an ordinary man. (4) The nicotine in a pack of 20 cigarettes, injected intravenously, is more than enough to kill four ordinary men. Just how much unburned nicotine compounds are absorbed from the smoke is hard to estimate, but the utter misery that follows the first cigar is sufficient to show that there is plenty of something to which the normal body violently rebels. Careful experimental work has demonstrated that even one or two cigarettes will cause definite narrowing of the small arterioles of the finger tips. Measure the temperature and blood flow while the patient is reclining and perfectly at rest. Let him, or her, smoke one or two cigarettes, and the temperature will show a measurable fall, and the amount of circulating blood will (in many, not all) be cut in women by 30 per cent, and in men to 10 per cent; and some of our cigarette makers say that by using their "filters" the loss in women can be cut to 20 per cent, and in men to 5 per cent. This explains perfectly the numbness and coldness of the fingertips of many of our women who come to us with early symptoms of tobacco amblyopia.

Along with this we find a slight premature loss of accommodation; the patient wants an age glass before his time. As the case goes on, gradually the central perception of red and green begins to fade, and distant vision to fail. After an undetermined time, there will be a total loss of central red and green perception; and, with the ophthalmoscope, you find that the whole of the area of the optic nerve that carries the fibers from the whole area of accurate vision (papillomacular bundle) will show a dull, greyish outline, and gradually the entire disc will appear atrophic. By this time, vision has probably fallen to 20/200 or even less; but, fortunately, if we

eliminate the cause, most of these cases will make a remarkable recovery. Not long ago, a well known artist came in, wanting glasses. She said her vision was failing and she could not get her colors properly. The only trouble I could find was a definite tobacco amblyopia, so I told her that all she had to do was to stop smoking and her eyes would soon be well. "Oh, I'm so nervous if I can't have my cigarettes," she said. "All right," I replied, "they are your eyes, and you can have eyes or cigarettes, as you prefer." She decided to take the eyes, and not long after, came in delighted with the result.

I have seen many advanced cases of tobacco blindness. Perhaps the most dramatic was the following:

A man of 62 came in with the following history. "Doctor, I want you to look at my eyes. They tell me I am going blind." His vision had fallen to 20/200, and he was unable to read at all. One of our best men in Virginia had told him his eyes were hopeless. Not satisfied with the verdict, he went to Philadelphia, where he was seen by two men known all over the world. The verdict was the same. "Mr. _____, your eyes are hopeless, the only thing for you to do is to go home and learn to be blind." After getting his history, I said, "It is useless for me to examine your eyes. I cannot possibly tell you anything that the Philadelphia men have not already told you." "Well, but I want you to see my eyes any way," was his reply. So, I started. As I got close to his eye with my ophthalmoscope, the first thought that flashed through my mind was, "If he hasn't tobacco blindness, he has missed an awfully good chance." Well, he had about as typical a case of this trouble as I ever saw. This was our exact conversation: "Mr. _____, are you willing to carry out instructions?" "I'll do anything on earth you tell me." "All right," I said, "don't *touch* tobacco for three months, and then let me see you." I can see him now as he went out the door, putting his hand into his right hand pocket and throwing his tobacco away. I gave *no* other treatment, and thought no more of the case.

A little over three months later, he walked in looking like a different person—20/30 uncorrected vision in each eye, and could read anything he wanted to.

I cannot agree with some of my Baltimore friends who say, "Let them go on smoking and give them plenty of vitamins to counteract the damaging effects." We were taught to always "remove the cause" rather than to let the cause continue its activity and try to counteract the effects.

As to the cancer problem, I have had no personal contact, except that one of my best friends, one of our most successful business men, who died of cancer of the lung, in the midst of a splendid career, was an inveterate smoker.

In all the extensive controversial articles, I have seen only *two lines* that barely hint at the damage to the eyes from the use of tobacco. As it is no longer a debatable question, perhaps the great tobacco advocates discreetly say nothing about it.

I might add that all of the patients with far-advanced tobacco amblyopia whom I have seen, have been cigar smokers, for in these cases the smoker has a double chance of absorption, both from the smoke and the moist tobacco in his mouth. I have not seen many of these advanced cases, but I am finding plenty of troubles from cigarettes.

Bibliography

1. Beer: Lehve der Augenkrankheiten, Wien, 1792, Zweiter Theil—p. 66.
2. MacKenzie: Practical Treatise on the Diseases of the Eye, 3rd Edition, London, 1840.
3. De Schweinitz: Toxic Amblyopias, Lea Bros, 1896, pp. 53-104. (over a hundred articles are noted in this book.)
4. Harvey B. Haag: Medical College of Virginia, Pharmacology of Tobacco, J. Am. Geriatrics Soc., II: No. 5, May, 1954.
5. Effects of Cigarette Smoke on the Peripheral Vascular System, July 4, 1953. J. A. M. A. 152: No. 10, P. 897.

104 East Market Street.

Congenital Skin Defects

GAYLE G. ARNOLD, M.D.
Richmond, Virginia

NUMEROUS infants with congenital skin defects have come to our attention in recent years. This condition has received very little attention, and is not mentioned in most of the usual pediatric or dermatology textbooks. Recognition of the condition should be beneficial to physicians and nurses, and might prevent needless anxiety for the parents.

This defect was mentioned as far back as 1826, and ABT[1], in 1917, fully described the malformation, and collected thirty-six cases from the literature. Other reports are not at all rare.[2,3,4,5]

The most common site for this lesion is the head,



Fig. 1
a. Composite of defects seen involving head. b. Healed congenital skin defect (newborn).



Fig. 2
a. The most common site of congenital skin defects (newborn). b. Multiple, healed congenital skin defects (newborn).

especially the vertex, but it may be found on the temporal region, the face, the lumbar area, the knees, thighs, and elbows, and may be single or multiple. When first seen, the appearance may be either (a) a reddish, raw, punched out area in the skin, with no hair, or subcutaneous tissue, well defined margins, and easy bleeding of the base with edges appearing slightly piled up, or (b) a well healed circumscribed round or oval scar, with a thin layer of skin over the base. Figures 1 and 2 illustrate the appearance of several of these defects.

Theories as to etiology include hereditary factors, amniotic adhesions, intrauterine healing of angiomata, pressure necrosis, and deficient union, embryonically, of the two subcutaneous layers which carry blood vessels.

Treatment in all the cases observed by us was limited to local antibiotic measures, to prevent infection. If necessary, total excision could be carried out and skin grafting might aid a large defect.

References

1. Abt, I. A.: Am. J. Dis. Child., 14: 113 (Aug.) 1917.
2. Adair, F. L., and Stewart, C. A.: Am. J. Dis. Child., 27: 60 (Jan.) 1924.
3. Dowler, V. B.: Am. J. Dis. Child., 44: 1279 (Dec.) 1932.
4. Sutton, R. L.: Arch. Dermat. and Syph., 31: 855 (June) 1935.
5. Callaway, J. L., and others, J. Ped., 28: 214, 1946.

Received for publication September 29, 1955.

Knotty Problems

Doctors who answer questions for other doctors have tangled with such knotty problems as: Should football players be given extra vitamins; are colored socks bad for sore feet, and what can be done with a four-year-old child who refuses food?

The consultants came up with the following answers in the October 15th Journal of the American Medical Association:

All "mass medicine," including vitamins and iron in daily doses, is bad medicine for athletes. The consultant quoted a resolution by a joint committee from the National Education Association and the A.M.A. It disapproved medicine or oxygen administration because players begin to expect it, and are encouraged to exert themselves beyond the limits they have learned "from instinct and experience." Giving drugs to stimulate athletes to greater activity or lessen the pain of an injury so they can keep playing is "poor medicine and worse education."

About colored socks: wearing them while suffering open foot sores "involves no common peril." Wearing white socks—a common recommendation for infections or other sores—is probably not necessary. Sometimes colored socks cause trouble, but only because of an allergy to dye or yarn.

The four-year-old who won't eat unless her parents feed her just needs to make "a new start in life," another consultant said. He recommended giving "a complete change" at mealtime—a new place to eat, different dishes, and even different people to serve her. Giving her favorite foods and a dull-edge knife to practice cutting and spreading will help. So will eating with other children. A short stay in the hospital—without parents—is a good last resort. Furthermore, there's no real reason to worry. The child probably won't go without food for more than three days anyway.

An Unusual Differential Problem In Endometriosis

RICHARD E. BOWER, M.D.
Richlands, Virginia

EXTERNAL endometriosis is a disease which at times presents protean manifestations. In the patient who has progressive dysmenorrhea with nodulation of the cul-de-sac and some degree of fixation of the internal genitalia, the diagnosis is more readily apparent. Dysmenorrhea as such is a difficult symptom to differentiate, as it may be of uterine, ovarian, or psychic origin. The bulk of patients with dysmenorrhea are emotionally tense individuals who await the coming menses with mounting horror, are seldom relieved by exercise, antispasmodics, or ovulation suppressing drugs. Hence, the differential diagnosis of this one symptom may require prolonged observation and much patience on the part of the patient and the physician. Patients of this type are ready to admit that each period becomes a little worse. They have usually been well indoctrinated before the menarche by a mother or friend who "almost dies every month" or who had an unbearable "change of life". Psychotherapy is usually recommended in these cases. The results in general are poor.

The essayist usually attempts first to localize the origin of dysmenorrhea. A uterine probe is passed into the endometrial cavity, attempting to reproduce the pain. Uterine pain is usually located in the mid-line, whereas ovarian pain is usually located in the lateral low quadrants and radiates into the thigh. Ovarian pain usually occurs before the period, whereas uterine pain begins with the establishment of the flow. 10 mg. oral testosterone daily through the interval between the menses suppresses ovulation by inhibiting follicle stimulating and luteinizing activity of the pituitary gland[1]. Dysmenorrhea of uterine or ovarian origin is thus reduced. Failure to do so (without the patient having been told the reason for the treatment) will establish a diagnosis of psychic pain.

In endometriosis, involvement of the sacro-uterine ligaments may produce pain in the lumbo-sacral region of a severe nature. Sieger and Bisaccio[2] in their series of cases found the following to be the symptoms presented by the patient with indometriosis: menorrhagia, metrorrhagia, periodic pains, low abdominal pain aggravated with the menses, jarring of the pelvis, intercourse, pelvic examination, or prolonged standing. Their commonest findings were cul-de-sac tenderness with or without induration, palpably enlarged ovaries, tender adnexa and uterine enlargement due to myomas. Recto-vaginal examination will be found to be the most important physical method.

The following case is presented because of an unusual condition which is rare, but which led the author and consultants to a diagnosis of endometriosis. Usually post-abortal, puerperal or Neisserian infections, tuberculous salpingitis, neoplasia of the rectum, ectopic pregnancy or carcinoma of the internal female genitalia are to be differentiated from endometriosis.

Posterior perineal herniae are not common and are not listed in the differential diagnosis of endometriosis in the source references of gynecology nor in a review of present day literature. To fully understand the anatomy of the hernia, it must be recalled that in the embryo the pouch of Douglas forms a canal exending to the perineum. Varying degrees of failure of closure of this pouch leaves a potential hernia site akin to failure of the tunica vaginalis which allows the abdominal contents to migrate to the scrotum. According to Watson[3], posterior perineal herniae are more common in women where it is called a retro-uterine hernia. It may descend between the rectum and vagina, may penetrate the levator ani and present at the perineum or in the ischio-rectal fossa. Intestine, omentum, bladder, uterus or ovary and tube may form the contents of the sac. There may be a uniform bulging into the vagina or rectum, or, where there is a distinct neck, incarceration of the contents may occur. Because of the proximity to the sacro-uterine ligaments it is readily apparent why the contents of the sac could be interpreted as a nodulation of these ligaments or an induration in the cul-de-sac. This, then, would confuse the examiner of the patient presenting herself with dysmenorrhea.

The following is the case history of a 28-year-old white female who had two term pregnancies, the last occurring six years ago. Since the last pregnancy she had been seen for a multitude of pelvic complaints. Except for cervicitis which responded

Received for publication July 14, 1955.

to coagulation and one bout of menorrhagia which responded to a dilation and curettage, the vagueness of her complaints, her admitted nervousness, and complaints relating to other regions of the body, led the examiners to feel that a large psychosomatic element was involved. She has a minus 21% BMR which responded to thyroid, and the remainder of

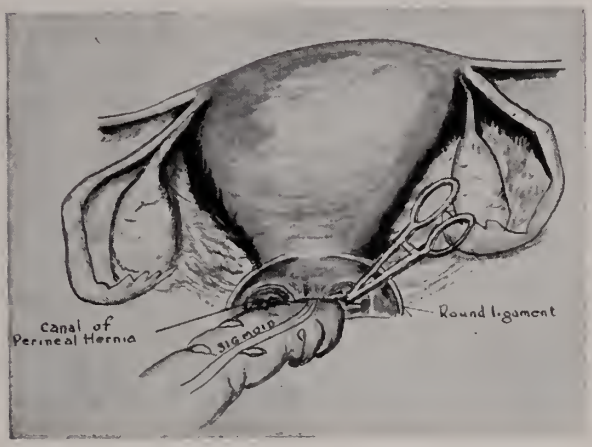


Fig. 1.—The Kelly hemostat descends the posterior hernia on the right to the level of the levator muscles. The ring on the right is divided from the ring on the left by a narrow bridge of peritoneum which represents the uterine-sigmoid reflection.

laboratory and x-ray findings were always within normal limits. It was at the time of her D. & C. in 1953 that she began complaining of pains in the low abdomen and lumbo-sacral region with a drawing sensation into the inguinal region and thighs. Subsequent periods produced the discomfort in severe degree until she was forced to bed in the latter part of 1954. There was tenderness in the fornices but no nodulation. A diagnosis of endometriosis was entertained and in the fall of 1954 she was placed on ten milligrams oral testosterone daily. She reported that in general she felt better but that the pelvic complaints were the same. With normal pelvic findings she was classified as psychosomatic dysmenorrhea and the testosterone was discontinued. In January, 1955, she reported to the out-patient department, stating that she was having constant pelvic pains. At this time there was a palpable tender cystic mass in the right fornix. She was placed again on testosterone and three weeks later examination revealed that the mass was gone but there was a tender induration along the left fornix. In February, 1955, she returned, stating that she was having worse pains and wondered if surgery would not relieve her. It was explained that at her age, surgery would consist in the removal of only implants (this being the first time that endometriosis was discussed). She readily consented to this and an exploratory laparotomy was scheduled.

Bilateral posterior herniae were discovered at operation and Kelly hemostats would descend in each sac to a distance of 6-7 cm.[1] There was a thin band of normal peritoneum from the uterus to the rectum. The sacs contained fine fibrous strands and there were two openings in the right and three in the left which were small blind pouches. These were in addition to the main sac which descended further. The sacs were obliterated with concentric layers of purse-string sutures. The necks of the sacs were freed from the peritoneum which was then closed separately. The patient's post-operative course was uneventful. Follow-up visits found her free of pain and there was only a slight residual thickening felt in the fornices. For some unexplainable reason, subsequent menses were without pain.

It is readily apparent why a hernia in this location would cause confusion and lead the examiner to feel that the physical findings were commensurate with those of endometriosis. The variety of structures that could enter sacs of the size of these would also cause a changing physical pattern.

Summary

1. Posterior perineal herniae cause anatomical changes that are confusing in differential diagnosis of external endometriosis.
2. The anatomy and embryology of posterior hernia are discussed.
3. A case is presented which reveals the similarity of physical findings of perineal herniae and endometriosis.

Bibliography

1. Meigs, Joe V.: Surg., Gynec., & Obst. 89: 317-321, 1949.
2. Siegler, S. L., and Bisaccio, J. R.: Am. J. Obst. & Gynec., 61: 99-108, 1951.
3. Watson, L. F.: Hernia, St. Louis, 1938, C. V. Mosby and Co.
4. TeLinde, R. W.: Operative Gynecology, Philadelphia, 1946, J. B. Lippincott.

Clinch Valley Clinic Hospital.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Public Health and Meat Inspection

Any study given to the transmission of infectious disease must eventually evaluate food as a vehicle. We are aware of the part milk and other foodstuffs play in passing an infectious organism from one individual to another. In any food of animal origin another factor becomes evident—such products can be no more free from disease than was their donor.

Milk is almost always pasteurized for the commercial market. However, not even this process renders it sterile. Most pathogenic bacteria are destroyed but production methods and the health of the cows play an important part in a safe milk supply.

Meat is found to be in somewhat the same category. Certainly, we will agree that we have become rather intimately involved with an animal when we begin to eat of its flesh. Again, the condition of the part, with regard to communicable disease, will be directly proportional to the general health of the donor.

Some may immediately say that since meat is cooked, all pathogens are destroyed. This may be true of certain kinds of meat and under certain circumstances but a large number of people enjoy their meats rare. Granted that all meats were cooked well done, there are other ways in which infection may be passed from the diseased animal to the susceptible consumer.

Various authorities tell us that it is possible for such organisms as the brucella group to penetrate the unbroken skin. Recent blood studies on packing house workers indicate almost a third of them have titres significant of infection. Refrigeration does not rapidly destroy the organism since viable brucella have been recovered from hams after normal refrigeration for several weeks. What then is the danger to a housewife handling infected pork chops? Each year the nation adds some 10,000 new human cases of brucellosis. We do not know how many others go undetected or unreported. So far this year in Virginia there have been 29 new cases reported. Brucellosis is not the only disease transmitted in meat. A host of others from taeniasis to tuberculosis may be carried and perhaps some we have not recognized as yet. It is interesting to note the number of nonspecific enteric conditions reported. It would be wise to reflect on the unreported cases that never reach the family physician. In the home it is often called "summer complaint", "Cholerae morbus", etc. Actually, many of these conditions are due to specific infections contracted via food. Some of this food is meat derived from infected sources or that is contaminated during preparation. Aside from the danger of disease inherent in a protected meat supply, there is the esthetic idea of what constitutes edible or inedible parts of meat or animals. It is not for the state to say who is right or wrong in his taste but competent inspection and labeling will assure each that the meat or meat product available to him is fit for human consumption.

Chemical preservatives and coloring can become a problem in meat and meat products. Close supervision is needed to avoid subjecting the consumer to dangerous or false products. As an illustration, it is possible to reconstruct lost hamburger with an agent that causes it to resemble the fresh product. It would not only be fraudulent but even dangerous to allow such practice.

After considering these public health reasons for safeguarding one's meat supply, it may be asked what can be done about it. Much is being done. The Federal Government has for years conducted ante-mortem and post-mortem inspection on all animals and meat products traveling in interstate commerce. Many packers have been left out of the Federal program because they do not qualify to engage in interstate shipping. In the past there have been local meat inspection services set up to cover those plants without Federal inspection. Sadly enough, these inspection services were often used as weapons to establish trade barriers against the free movement of meat and meat products from one community to another. This was not prevalent in Virginia but may have occurred. With this information at hand and in order to promote a uniform service, the General Assembly of 1954 passed an Act authorizing the State Health Department to establish a meat inspection service. This service may be rendered to a packer upon his request, provided he meets specifications for sanitation and agrees to reimburse the state for the cost of inspection. After a thorough ante-mortem—post-mortem inspection of all animals

going through the plant, plus supervision of all meat products manufactured, a stamp of approval is placed on each wholesale cut or package. With this stamp the product can move into all areas of the state. Local ordinances which require either the Federal or State stamp make inspection compulsory on those desiring to sell in the larger urban markets. At present, many of the cities in Virginia have such ordinances in force. More are in the process of enacting ordinances and before long it is anticipated that most large markets will be closed to uninspected meat.

The Virginia Packing Industry has been most cooperative since the State Meat Inspection was activated about one year ago. Through August of this year 90,563 animals and 4,299,013 lbs. of processed meats have been inspected under the regulations of the Service.

The Meat Inspection Service of the State Health Department stands ready to assist any community in Virginia that may desire a wholesome and safe meat supply.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE

	Oct. 1955	Oct. 1954	Jan.-Oct. 1955	Jan.-Oct. 1954
Brucellosis	6	5	30	42
Diphtheria	11	1	30	28
Infectious Hepatitis	57	174	977	3285
Measles	51	88	3795	23528
Meningococcal Infections	6	4	78	84
Poliomyelitis	43	134	304	553
Streptococcal Infections	372	249	5930	4007
Tularemia	1	2	12	31
Typhoid Fever	10	9	42	51
Rabies (In Animals)	36	27	331	311

Let's Reminisce!

In the Virginia Medical Monthly, Volume 1, April 1874, the following advertisements appear:

University of City of New York—Fees for the Winter Course

For course of lectures	$140.00
Matriculation	5.00
Demonstrator's fee, including material for dissection	10.00
Graduation fee	30.00

Medical College of Virginia

Expenses for whole course including matriculation fee	$125.00
Practical anatomy, demonstrator's fee	10.00
Graduation fee	30.00

Good board from $15.00 to $25.00 per month.

Blue Ridge Springs, Botetourt County—Delightful summer resort

For summer season	$45.00 per month for 30 days
Two months	50.00 per month
One day	3.00

Children under 12 and servants—half price.

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

Thorazine as a Sole Therapeutic Agent in Certain Mental Disorders

Since the conception early this year of this modest study of a limited number of cases, the accumulated literature on Chlorpromazine has become so voluminous that the briefest survey of it would be as presumptuous as unnecessary. The study of a small group of cases, however, not infrequently has advantages over a larger series by affording more intensive observation, greater selection, and more rigid control of extraneous circumstances.

The original object of this work was clinically to evaluate the therapeutic efficacy of Chlorpromazine used exclusively on mentally ill patients, and under circumstances of as rigid scientific control as possible (in a fairly large public institution). The controls set forth were as follows: 1) that this drug and no other drug (save an occasional laxative) be given during the period of therapeutic trial; 2) that no other of the heretofore conventional forms of psychiatric therapy be simultaneously employed; 3) that there be uniformity of dosage, sex, environment, and custody—and age-range, insofar as the latter might be feasible; 4) that the same physician and assistants evaluate the patients' condition before and after treatment. The above conditions were adhered to as strictly as possible.

For the sake of brevity as well as clarity, it appears desirable to transcribe the results herewith in simple tabulated form.

Tabulation of Data of a Total of 17 Selected Cases Receiving Thorazine Exclusively:

1. All were males.
2. All ages from young adulthood to senility were represented.
3. *All other forms of therapy,* including medicinal, electroshock, physiotherapy, and psychotherapy had been used *to no avail* in the patients' then current conditions.
4. All patients received *no other forms of treatment except Thorazine alone* for their then current nervous or mental disorders.
5. All patients in this group were treated for varying durations between February 1, 1955 and September 6, 1955—i.e., roughly a span of six months.
6. *Dosages*—Except for one improved case receiving Thorazine ten mgm. t. i. d., *all* patients received a uniform daily dosage of 200 mgm. by mouth—usually 50 mgm. q. i. d.
7. *Treatment Results According to Diagnosis*—17 Cases total.

Diagnosis	*No. Cases*	*Improved*	*Not Improved*
Acute Alcoholic Psychosis	1	1	-
Involutional Psychosis	3	3	-
Manic depressive, manic	4	3	1
Psychosis with Post-Encephalitis (Parkinsonism)	1	-	1
Psychosis with Cerebral Arteriosclerosis	2	2	-
Schizophrenias:	6	4	2
Catatonic	(3)	(1)	(2)
Chronic undifferentiated	(1)	(1)	( )
Schizo-affective	(1)	(1)	(-)
Paranoid	(1)	(1)	( )

8. *Summary of Results:*

A. No. Cases Hospitalized over 2 years	9
Improved	6
Not Improved	2
Made Worse	1
Complications	—
Furloughed or Discharged	—
B. No. Cases Hospitalized Less than 2 years	8
Improved	7
Not Improved	1
Made Worse	—
Complications	—
Furloughed or Discharged	6

9. *Comment:* In a series of 17 selected active mental patients in all of which Thorazine was used *exclusively,* and in which all heretofore conventional methods of therapy had been of no demonstrable benefit, fourteen were improved, three were not improved, and one became worse mentally. These results were achieved on the whole group within a period of six months. While six of the nine chronic cases were improved, and none were furloughed or discharged, seven of the eight patients hospitalized less than two years were improved, and six of these seven were furloughed or discharged and have re-

Contributed by JAMES S. DEAN, M.D., *Staff Physician Southwestern State Hospital, Marion, Virginia.*

mained so up to this date (September 20, 1955). This fact seems to emphasize once more the virtue of early treatment but by no means discredits the value of the drug in so-called "institutionalized" mental patients.

The results of this study would appear to indicate that Thorazine, used alone and in moderate oral dosage, is a very effective solitary therapeutic agent in a variety of acutely as well as chronically mentally ill patients. (By this statement the writer does not intend to imply that other proven effective measures should at present be abandoned.)

(The writer is indebted to the Superintendent of the Southwestern State Hospital for permission to conduct this study, and both are very appreciative of the cooperation and generosity received of the Smith, Kline and French Laboratories, Philadelphia, through their Roanoke, Virginia, Professional Service Department in providing, gratis, ample supplies of Thorazine for this work.)

Joint Commission on Accreditation of Hospitals

In June, 1955, the House of Delegates of the American Medical Association authorized the Speaker to appoint a committee ". . . to review the functions of the Joint Commission on Accreditation of Hospitals . . ." and ". . . to make an independent study or survey and report its findings and recommendations to the House of Delegates at the next annual meeting. All physicians and hospitals are urged to pass on to this special committee any observations or suggestions concerning the functioning of the Joint Commission on Accreditation of Hospitals."

This Committee was appointed, and now, in undertaking the task assigned to it, is seeking to obtain from physicians and others their observations concerning the functioning of the Joint Commission.

It is obviously impossible for the Committee to contact all physicians and others who may have observations or comments concerning the matter of hospital accreditation. You, however, could be of invaluable assistance to the Committee by notifying your membership of the existence of the Committee and its survey. The Committee therefore would appreciate it if you would reproduce this memorandum in your journal, bulletin, newsletter, or in some special mailing to your membership. This would assist the Committee to obtain a cross section of observations concerning the accreditation program.

The Committee is interested especially in the following:

1. The general understanding by physicians of the functions of the Joint Commission.
2. Whether the method of appeal from an adverse ruling regarding accreditation is satisfactory.
3. The effect on the individual physician's hospital connections due to actions of the Joint Commission.
4. Whether any organizations not now represented should have official representation on the Joint Commission.
5. The effect of the Joint Commission's requirements concerning such matters as staff meetings.
6. The pros and cons of separating administrative and professional accreditation functions in the inspection of hospitals.
7. Constructive suggestions for improving the hospital accreditation program.

Any comments from individual members or state and county societies should be addressed to:

W. C. Stover, M. D., Chairman
Committee to Review Functions of Joint
Commission on Accreditation of Hospitals
535 North Dearborn Street
Chicago 10, Illinois

These comments should reach the chairman not later than January 15, 1956.

Woman's Auxiliary . . . .

New Officers.

The following are the new officers of the Auxiliary, elected at the annual meeting in Richmond: President, Mrs. M. W. Glover, Arlington; president-elect, Mrs. Lee S. Liggan, Irvington; vice-presidents, Mrs. Charles A. Easley, Danville; Mrs. C. C. Hatfield, Saltville; Mrs. John St. George, Portsmouth; recording secretary, Mrs. J. R. Grinels, Richmond; corresponding secretary, Mrs. Robert Detwiler, Arlington; treasurer, Mrs. William Grizzard, Petersburg; and directors, Mrs. Maynard R. Emlaw, Richmond; Mrs. Kalford W. Howard, Portsmouth; and Mrs. J. E. DeCormis, Accomac.

Mrs. Glover has also announced the following committee chairmen: Finance, Mrs. William C. Barr, Richmond; Legislation, Mrs. Frederick L. Finch, Richmond; Organization, Mrs. Lee S. Liggan, Irvington; Program, Mrs. Charles A. Easley, Danville; Publications, Mrs. William J. Weaver, Alexandria; Public Relations, Mrs. James Moss, Alexandria; Revisions, Mrs. John St. George, Portsmouth; Today's Health, Mrs. J. R. McGriff, McLean; A.M.E.F., Mrs. Delmas Jones, Norton; Bulletin, Mrs. J. R. B. Hutchinson, Arlington; Cancer Control, Mrs. Herman W. Farber, Petersburg; Civil Defense, Mrs. John R. Mapp, Nassawadox; Clipping Service, Mrs. Macy Rosenthal, Lynchburg; Leigh-Hodges-Wright Memorial, Mrs. Fletcher J. Wright, Petersburg; Mental Health, Mrs. Richard M. Reynolds, Norfolk; Nurse Recruitment, Mrs. Edward Ray, Richmond; Historian, Mrs. Hawes Campbell, Richmond; Councilor to Southern, Mrs. Kalford W. Howard, Portsmouth; Research and Romance of Medicine, Mrs. Lee B. Martin, Arlington; Parliamentarian, Mrs. Eugene Grether, Alexandria; and Members-at-Large. Mrs. Boyd H. Payne, Staunton.

Petersburg.

The Auxiliary to the Petersburg Medical Society met on October 25th at the home of Mrs. Joseph McCormick, with Mrs. Kirby T. Hart, Jr., presiding. The guest speaker was Mrs. R. F. Burke Steele, President of the Petersburg Chapter of the National Association for Retarded Children. This auxiliary has the class for retarded children as one of its projects and provides equipment, supplies and plans parties for holidays throughout the year. Mrs. E. Palmore Irving and Mrs. Fletcher J. Wright, Jr., were in charge of the Halloween party.

Mrs. Meade Edmunds and Mrs. Herbert Jones, co-chairmen of the Ways and Means Committee, announced plans for the luncheon meeting which was held on November 29th to raise funds for the Nursing Education Foundation.

Mrs. Glenn Phipps, chairman of the rummage sale held October 13th and 14th, announced a profit of $86.11. Another will be held on April 20th and 21st, 1956.

Members of the auxiliary assisted in the fund raising drive for the National Association for Retarded Children and in the Muscular Dystrophy Drive.

RUTH L. GRIZZARD (MRS. WILLIAM S.)

Northampton-Accomac

The Auxiliary to the Northampton-Accomac Medical Society met on October 25th at the Nurses Home of the Hospital at Nassawadox. There were 18 members and 1 guest present.

Dr. David Dabnew, Administrator of the Hospital, spoke on Nursing Education, the recruiting and training of nurses and the problems connected with this. He asked the Auxiliary to assist in locating some person to travel through the two counties to secure recruits.

Mrs. John R. Mapp, retiring president, gave her annual report of the Auxiliary activities and Mrs. J. L. DeCormis reported on the annual meeting of the State Auxiliary in Richmond. Other officers and committee chairmen also gave their reports.

The following were elected as officers for 1956: President, Mrs. Donald Fletcher; president-elect, Mrs. W. A. Eskridge; vice-president, Mrs. R. K. Brown; secretary, Mrs. Milton Kellam; and treasurer, Mrs. John R. Freedman.

Following the program, Mrs. W. L. Cosby and Mrs. Polk Kellam provided a delightful musical interlude. A social period and refreshments were enjoyed by all.

CATHERINE R. TROWER
Chairman, Press and Publicity

Richmond.

The Richmond Auxiliary had no regular October meeting. Instead we played hostess to the Woman's Auxiliary to The Medical Society of Virginia, October 16-19. We feel that our most valuable contribution was our own Lucia Emlaw, who completed her term as state president. We only hope that our tea at the Valentine Museum and our luncheon-fashion show at the Commonwealth Club were enjoyed by our guests. Nor should we fail to mention the delightful and informal talk by our Southern Medical president, Mrs. Hundley, who won all of our hearts. Being hostess was a most enjoyable and rewarding experience to the Richmond wives.

MARGARET MEADOR (MRS. CARL W.)
President-Elect

The Medical Society of Virginia . . . .

COUNCIL MINUTES

The Meeting of the Council of The Medical Society of Virginia was called to order by Dr. Carrington Williams, President, at 1:00 P.M. on Sunday, October 16, 1955, at the Hotel Jefferson, Richmond. A quorum was announced. Attending were: Dr. Frank A. Farmer, Dr. Wilkins J. Ozlin, Dr. Louis P. Bailey, Dr. Harold W. Miller, Dr. Guy W. Horsley, Dr. Mack I. Shanholtz, Dr. James P. Williams, Dr. Harry C. Bates, Jr., Dr. John T. T. Hundley, Dr. Walter P. Adams, Dr. James W. Love, Dr. A. A. Creecy, Dr. James P. King, and Dr. McLemore Birdsong. Also present were Dr. Waverly R. Payne, President of the State Board of Medical Examiners, Dr. K. D. Graves, Secretary of the Board, and Mr. Robert C. Duval, Attorney for The Medical Society of Virginia.

Dr. Harry J. Warthen, Jr., Chairman, presented the report of the Finance Committee, and the proposed budget for fiscal 1955-56 was discussed in detail. (The complete budget is included in the minutes of the first session of the House of Delegates.)

The report of the special committee appointed to develop and recommend a seal for the Society was then presented. Dr. Warthen, Chairman, showed a number of designs and pointed out the two liked best by the Committee. The Council selected a seal featuring the head of Aesculapius. It was moved that the seal be recommended to the House of Delegates with the stipulation that it supersede any seal which might exist. The motion was adopted.

Representatives of the Virginia Physical Therapy Association were then heard on their proposal to establish a state registration for physical therapists. It was pointed out that recent medical developments have created an increased demand for physical therapists, and that a state registration would identify qualified therapists to the medical profession. It was moved and passed that the request for Society approval be referred to the Legislative Committee.

Council was then advised that temporary licenses to practice chiropractic and naturopathy, granted by the Virginia State Code, will expire on June 30, 1956. Several possibilities were mentioned, but the consensus of opinion seemed to be that it would be best to let the statute remain as it is, thereby dying of its own limitations. It was then moved and passed that no action be taken by the Society.

A request from the Virginia Funeral Directors Association that the Society approve efforts to amend the Virginia State Code as it pertains to the extent of preferences of various persons in insolvent estates was considered. It was brought out that in the case of final illnesses, physicians, funeral directors, druggists, nurses, and hospitals receive certain allowances when the estates are insolvent. There was some thought that it would be unwise to seek an increase in allowances at this time. A motion was made and passed that no action be taken.

A progress report on Hospital-Physician Relationships was given by Dr. James P. Williams and Mr. Duval. Mr. Duval pointed out he had met with Mr. Hunton, Attorney assisting the Virginia Hospital Association, and that a better understanding had been reached concerning problems involving hospitals and physicians. It was also pointed out that the Medical Service Committee recommended that no changes be made in the Medical Practice Act.

Dr. Farmer then presented the report of the special insurance committee. The committee had requested proposals for state wide professional liability coverage from most of the companies in the field. Two very fine proposals had been received, and it was the Committee's recommendation that the proposal submitted by the St. Paul-Mercury Indemnity Company, St. Paul, Minnesota, be accepted. Dr. Farmer expressed the firm conviction that the St. Paul-Mercury plan would solve most of the problems plaguing the membership of the Society at the present time.

The success of the plan, according to Dr. Farmer, would depend in large part upon the cooperation of the component medical societies. The role of local insurance committees was discussed, and suggestions made for implementing the plan at the earliest possible date. It was moved and passed that the plan be recommended to the House of Delegates for acceptance. The motion carried.

Consideration was given the 1958 Annual Meeting and it was decided to recommend Richmond as the Convention site. Such a motion was made and passed.

Regret was expressed for the illness and absence of Dr. Vincent Archer. It was moved and passed that a telegram be sent Dr. Archer wishing him a quick recovery and letting him know that he was missed.

A resolution from the Old Dominion Medical

Society was discussed. This resolution endorsed the action of The Medical Society of Virginia in making membership possible for Negro physicians and urged component societies to follow up this action by removing all remaining barriers. It was moved that the resolution be referred to the component societies. The motion carried.

The future of "Belroi", birthplace of Dr. Walter Reed, was discussed. It was reported that every effort had been made to have the National Park Service and other interested groups take over the property, but to no avail. It was then recommended that the Mid-Tidewater Medical Society be requested to assume custodial care of the property and to make such recommendations for its maintenance or disposition as thought best. A motion to this effect was made and carried.

Dr. Shanholtz then requested Council to approve a resolution which would endorse legislation relating to the quarantine and/or enforced isolation of tuberculosis patients known to have the disease in communicable form. It was brought out that the Committee on Tuberculosis had recommended such legislation in its report. Approval of Council was given.

Next considered was a request from the Virginia Tuberculosis Association that The Medical Society of Virginia endorse its legislative objectives which will be recommended to the 1956 General Assembly. It was mentioned that the suggestions should be studied carefully and that it would be best to refer the request to the Legislative Committee. The motion for referral was made and carried.

A question was raised concerning that part of the Medical Service Committee report which would put the Society on record as favoring administration by the State Department of Health of a chronic illness program. Dr. Shanholtz explained that the Committee passed such a resolution as a precautionary measure, with the expectation that federal legislation will bring about creation of new nursing homes, chronically ill hospitals, etc. It was the feeling of the Committee that the Department of Health was the best qualified State agency to supervise such a program.

There being no further business, the meeting was adjourned.

At a special meeting of Council called on Monday morning, October 17, at the Hotel Jefferson, Richmond, it was recommended that a special committee be appointed to study the present and future housing needs of the Society and to make such recommendations as it deemed advisable.

HOUSE OF DELEGATES

First Session

The House of Delegates of The Medical Society of Virginia met in the Empire Room of Richmond's Hotel Jefferson on October 16, and was called to order at 8:00 P.M. by Dr. Carrington Williams, President.

Dr. Williams introduced Dr. John T. T. Hundley, Speaker of the House, who called for a report from Dr. Ira L. Hancock, Chairman of the Credentials Committee. Dr. Hancock reported a quorum present.

Minutes of the 1954 Meeting of the House of Delegates were then approved as published in the January, 1955, issue of the Virginia Medical Monthly.

Mrs. Maynard R. Emlaw, President, and Mrs. Mervin W. Glover, President-Elect of the Woman's Auxiliary to The Medical Society of Virginia were then introduced. Mrs. Emlaw reported a year of great activity and progress by the Auxiliary.

Delegates to special conventions were then recognized. Dr. James P. King, and Dr. Frank A. Farmer represented the Society at the Annual Meeting of the Virginia Pharmaceutical Association and Dr. James L. Hamner at the Virginia Academy of General Practice.

Reports of the two state chapters of the National Student AMA were given by Mr. Jake Humphries, Medical College of Virginia, and Mr. Julius Conn, University of Virginia. Both delegates reported an ever increasing interest in medical society affairs on the part of medical students, and expressed appreciation for the assistance in sending representatives to the National Student AMA meeting in Chicago.

Dr. Hundley then introduced the following visiting delegates to the Annual Meeting: Miss Hazel Knibb, Graduate Nurses Association of Virginia, Mr. Charles E. Green, Jr., and Mr. James E. Steger, Virginia Pharmaceutical Association, and Dr. W. J. Longan of the Virginia State Dental Association.

The Speaker recognized Dr. Harry J. Warthen, Jr., Chairman of the Finance Committee, who presented the proposed budget for fiscal 1955-56 as recommended by the Council. The total budget of $74,205 was adopted and is listed below.

BUDGET 1955-56

Executive Office	
Salaries	$24,000
Telephone & Telegrams	1,500
Postage	650
Stationery & Supplies	800
Office Equipment	1,400
Building Maintenance	2,100

Building Repair	500
Convention Expenses	1,000
Council & Committee Expenses	2,500
Delegates to AMA	1,500
Executive Assistant	350
President's Expenses	1,000
Traveling Expenses	2,000
Virginia Medical Monthly	18,500
Scientific Exhibits	2,500
Postgraduate Medical Education	1,000
Legislative Committee	2,000
Walter Reed Commission	500
Woman's Auxiliary	100
Membership Dues—Affiliated Agencies	150
Editor Virginia Medical Monthly	600
Special Appropriations	
Virginia Council on Health and Medical Care	2,000
American Medical Education (Contribution for 1956)	2,000
National Society on Medical Research	150
Student AMA	200
National Conference of Physicians and Schools	80
Speed Graphic Camera	400
American Medical Education Foundation (Special Gift for 1955)	1,000
Social Security	425
Miscellaneous	500
PUBLIC RELATIONS	
Conference Expenses	650
Radio & Press	600
Literature & Bulletins	1,250
Exhibits	100
Miscellaneous Projects	200
	$74,205

Dr. Warthen reported for the Special Seal Committee and showed the design recommended by Council. The design, featuring the head of Aesculapius, was adopted as the official seal of The Medical Society of Virginia.

Called for next was the report of the Special Insurance Committee which had been appointed to seek a solution to the many problems connected with professional liability insurance. Dr. Farmer, Chairman, reported that the Committee had delved into the matter thoroughly and had arrived at the conclusion that a plan of insurance on the State level, administered by a reputable carrier, would solve most of the problems now plaguing the membership. He stated that proposals had been requested from a number of companies prominent in the liability field, and that the proposal of the St. Paul Mercury Indemnity Company seemed to hold the most promise.

After hearing Dr. Farmer read excerpts from the proposal, it was moved and passed that the plan be accepted.

The 1957 Annual Meeting was then discussed and it was brought out that the Society had been invited to meet in Washington, and that the Shoreham had been tentatively selected as headquarters. A motion was made and adopted that Washington be approved as the site for the 1957 Meeting and final details be left to Council.

Discussed also was the site for the 1958 Annual Meeting. Dr. Hundley mentioned that the meeting had been proposed for Richmond.

Dr. Kinloch Nelson moved that the Society investigate the possibility of holding the Annual Meeting somewhere other than the metropolitan centers of the State. After some discussion, Dr. Nelson withdrew his motion and offered another which would have the Society meet hereafter in Washington. There was no second.

It was then moved and carried that the 1958 meeting be scheduled for Richmond.

The Speaker informed the House of Dr. Archer's illness and stated that Council had prepared a telegram conveying wishes for a quick recovery.

Reported next was a recommendation from Council that the Mid-Tidewater Medical Society assume custodial care of "Belroi", birthplace of Dr. Walter Reed. The difficulties of properly maintaining the property were described and it was explained that while it was hoped the Mid-Tidewater Society would take over custodial care, The Medical Society of Virginia would continue to bear the expense of upkeep. It was moved and carried that the recommendation of Council be adopted.

The following Committee reports, published in the October, 1955, issue of the Virginia Medical Monthly, were adopted: Executive Secretary-Treasurer, Delegates to the American Medical Association, Woman's Auxiliary, and Committee on Scientific Exhibits (although no supplemental report was offered, Dr. Barker cited the fine work of Dr. Frank Blanton.)

The report of the Medical Service Committee was adopted, after which the following recommendations of the Committee were approved:

(1) That The Medical Society of Virginia go on record advocating no change in the Medical Practice Act as passed by the Legislature;
(2) That the problem be studied thoroughly and

that an effort be made to find a mutually satisfactory arrangement for the hospitals and the physicians;

(3) That meetings be held between representatives of The Medical Society of Virginia with their legal advisor, and representatives of the Virginia Hospital Association and their legal advisor, to see if there is some way by which the difficulties between the hospital and physician may be settled amicably.

Attention was also called to that part of the report concerning the administration by the State Board of Health of a chronic illness program (page 465, October, 1955, Virginia Medical Monthly).

Reports of the Membership Committee and the Judicial Committee were adopted. A proposed amendment to Article VIII of the Constitution, set forth in the Judicial Committee report, was considered. This amendment would change the name of the Grievance Committee to Mediation Committee, and would substitute an Editorial Board for the present Publication Committee. It was moved and passed by a nearly unanimous vote (two-thirds vote necessary for Constitutional amendments) that the amendment be adopted.

The proposed amendments to the By-Laws, set forth in the Judicial Committee report, were presented and held over until the second session of the House.

It was moved and carried that the following reports be adopted: Ethics Committee, Public Relation Committee, Grievance Committee, Finance Committee, House Committee, and the Cancer Committee (the report changed to delete the Louise Obici Clinic, which had decided to suspend activities, from the list of approved clinics). Attention was called to the part of the Cancer Committee report which recommended adoption of an agreement between the Virginia Division of the American Cancer Society and The Medical Society of Virginia.

Reports of the following were also adopted: Committee for Conservation of Sight, Committee on Federal Medical Services, Advisory Committee to the Women's Auxiliary, National Emergency Medical Service Committee, Committee to Confer with the State Board of Nurse Examiners, and the Polio Committee. A supplemental report of the Polio Committee was made by Dr. Lee E. Sutton, Jr., and can be found in the supplemental report section of this issue. The supplemental report was also adopted.

The report of the Committee on Maternal Health was then adopted. Dr. Hundley directed attention of the House to parts of the report making specific recommendations (see pages 472-473 of the October, 1955, Virginia Medical Monthly.)

Next considered was the report of the Committee on Child Health which was also adopted. Attention was again called to certain recommendations contained in the report, particularly that part pertaining to the use of prophylaxis in the eyes of newborns. (See page 473 of the October, 1955, Virginia Medical Monthly.)

Adopted next was reports of the following: Walter Reed Commission, Seal Committee, and the Liaison Committee to the United Mine Workers Welfare and Retirement Fund.

The next report considered was that of the Mental Hygiene Committee. It was moved and passed that the report be adopted with elimination of that portion recommending that local societies designate one or more physicians as best qualified to take care of the acute alcoholic in the community.

Dr. Rawles was recognized and offered a resolution which would appoint a special committee to study the success of the treatment of alcoholics and advise the Legislative Committee of its findings prior to the next session of the General Assembly. The resolution was referred to the Reference Committee.

The report of the Tuberculosis Committee was considered and adopted. It was then moved and passed that the House approve the Committee's recommendation that the Society go on record as approving adequate laws to control open cases of pulmonary tuberculosis when they have refused care or have left the institution against advice.

The following reports were also adopted: Rehabilitation Committee, American Medical Education Foundation Committee, Publication Committee, the Cerebral Palsy Committee, and the Program Committee. (Reports of the last four committees, although available to Members of the House during the Meeting, were not published previously in the Virginia Medical Monthly. They can be found in the supplemental report section of this issue.)

Dr. Hundley called for new business and resolutions introduced by the following delegates were referred to the Reference Committee.*

Dr. Mallory S. Andrews—resolution to amend By-Laws and fix at ten years the period of membership required for a member over 70 years of age to be exempt from payment of annual dues.

Dr. Kinloch Nelson—resolution to investigate possible locations for the Annual Meeting other than metropolitan centers of Virginia.

Dr. Harold W. Miller—resolution which would have Society delegates to AMA initiate or support action to return to AMA, through its Council on

Medical Education and Hospitals, the responsibility for the Hospital Accreditation program.

Dr. Rufus Brittain—resolution which would make clear the desire of organized medicine to remain free of any Social Security program not actuarially sound.

Dr. Guy W. Horsley—resolution which would have the Society investigate the misuse and exploitation of prepayment plans and initiate program designed to end wastage and the unnecessary use of the medical care dollar.

A meeting of the Reference Committee was announced for 10:00 A.M. the following morning, October 17, in the Library of the Jefferson.

There being no further business, the meeting was declared adjourned until Tuesday, October 18, 1955, at 4:00 P.M.

---

*Text of resolutions included in minutes of Second Session, House of Delegates.

Members of the Nominations Committee were Dr. J. R. Parker, First District; Dr. W. H. Whitmore, Second District; Dr. R. D. Butterworth, Third District; Dr. James L. Hamner, Fourth District; Dr. W. N. Thompson, Fifth District; Dr. W. V. Rucker, Sixth District; Dr. Rufus Brittain, Ninth District; Dr. Guy R. Fisher, Seventh District; Dr. Paul C. Pearson, Eighth District; Dr. Charles V. Amole, Tenth District.

SECOND SESSION

The Second Session of the House of Delegates of The Medical Society of Virginia was called to order by Dr. John T. T. Hundley, Speaker of the House, at 4:00 P.M., Tuesday, October 18, 1955, in the Flemish Room of the Hotel Jefferson.

Dr. Hancock, Chairman of the Credential Committee, announced that a quorum was present.

Considered first was the report of the Reference Committee. The Committee recommended that a resolution introduced by Dr. Rawles be adopted, and it was moved and carried that the Committee's recommendation be followed. The resolution follows:

WHEREAS, it is understood that a Bill will be presented to the General Assembly of Virginia to establish additional alcoholic treatment clinics in the State and also to establish a rehabilitation hospital for alcoholics requiring large expenditure of funds devised from the citizens of the Commonwealth
AND WHEREAS, some physicians and lay people have reservations as to whether the success of the treatment of alcoholics justifies the expenditure of such funds
THEREFORE, BE IT RESOLVED, that The Medical Society of Virginia appoint a special committee to study the matter and to advise the Legislative Committee of the Society prior to the next session of the General Assembly of their conclusion.
AND FURTHER BE IT RESOLVED, that this Committee be composed of physicians not primarily interested in the treatment of alcoholics, but that they be advised to interview physicians who do treat alcoholics, members of Alcoholics Anonymous, members of the clergy, social workers and others interested in the problem.

The following resolution, introduced by Dr. Nelson, was then adopted on the recommendation of the Committee:

RESOLVED THAT, The Medical Society of Virginia investigate possible locations for the Annual Meeting other than metropolitan areas of Virginia.

It was reported that the Reference Committee did not approve the resolution which would have Society delegates to the AMA initiate or support action to return to the AMA, through its Council on Medical Education and Hospitals, the responsibility for the Hospital Accreditation program. . . . A motion was made and carried that the resolution not be adopted.

The following resolution, introduced by Dr. Brittain, was reported favorably and adopted:

WHEREAS, The Medical Society of Virginia believes firmly in the democracy which has made this Country grow; and
WHEREAS, It is the belief of this organization that Social Security is actuarially unsound and will defeat the principles which have made this Country prosper, and
WHEREAS, We, the members of this organization, realize the opportunity that is ours to selfishly benefit by early inclusion in this program
BE IT RESOLVED, that in the interest of our Country's continued progress, although at possible personal sacrifice, to us individually, we hereby instruct our Delegates to the AMA to support or initiate such action as will make clear the desire of organized medicine not to be included in any Social Security program that is not actuarially sound as a matter or principles in the hope that by this example we may lend support to that opposition to the socialization of our government, and
BE IT FURTHER RESOLVED, that a copy of this resolution be mailed promptly to all officers and Virginia Delegates and Alternates to the AMA.

Also adopted was the following resolution, offered at the request of Dr. Horsley:

WHEREAS, the physicians who serve as Directors of the Blue Shield Plan conducted by Virginia Medical Service Association wholeheartedly subscribe to the tenet of free practice of medicine; and
WHEREAS, the Directors firmly believe that without availability and use of economical and equitable prepayment plans, the difficulties of meeting unbudgeted health care expenses, particularly those pertaining to hospitalization and to proper compen-

sation of physicians' services, may precipitate in injudicious public action that would jeopardize the continuance of free medical practice; and

WHEREAS, at the same time that the constantly increasing costs of providing health care are making prepayment plans more valuable, not only to the public but also to individual physicians and to organized medicine, misuse and exploitation of the plans are producing a progessively adverse effect upon the financial operation of the plans which is necessarily reflected either by increases in charges to the public or by decreases in the adequacy of coverage; and

WHEREAS, misuse and exploitation of the plans, therefore, not only are increasing the overall expense of health care which the public must meet, but also are endangering the successful continuation and further development of those plans; and

WHEREAS, the physicians practicing medicine in Virginia are in a position to assist greatly in the control of misuse and exploitation of prepayment plans;

THEREFORE, BE IT RESOLVED THAT the Directors of Virginia Medical Service Association respectfully petition the House of Delegates of The Medical Society of Virginia to take the matter of misuse and exploitation of prepayment plans under advisement and to initiate an aggressive program, to be continued under the acknowledged sponsorship and supervision of the Society, which shall include all physicians practicing in Virginia, and through them the public, toward the end that wastage of unnecessary use of the medical care dollar be eliminated and the continuation of the free practice of medicine be thus further assured.

The Speaker reported that the Reference Committee had carefully studied the supplemental report of the Polio Committee and had recommended the deletion of paragraph E, which suggested that a minimum rate of $10 per hour be established by State and local agencies as a reasonable compensation to physicians administering the vaccine at Public Health clinics. It was moved and passed that the Committee's recommendation be approved.

The following amendment to Article II of the By-Laws, prepared by Dr. Andrews, was adopted:

Section 3—Amend last sentence to read "Any member over seventy (70) years of age upon his request may be exempt by the Executive Secretary-Treasurer provided he has been a member in good standing for the previous ten years."

Proposed amendments to the By-Laws which would provide a Vice-Speaker for the House of Delegates, change the name of the Grievance Committee to Mediation Committee, and provide for an Editorial Board to replace the Publication Committee, were adopted. (These amendments may be found immediately following these minutes.)

A motion to reconsider the resolution opposing any Social Security program not actuarially sound was lost.

Dr. Guy R. Fisher, Chairman of the Nominations Committee, was recognized and submitted the following nominations:

President Elect: Dr. James D. Hagood, Clover
1st Vice-President: Dr. John P. Lynch, Richmond
2nd Vice-President: Dr. Walter C. Elliott, Lebanon
3rd Vice President: Dr. Charles L. Savage, Waynesboro
Executive Secretary-Treasurer: Robert I. Howard
Councilors:
1st District: Dr. Albert A. Creecy, Newport News
3rd District: Dr. Benjamin W. Rawles, Jr., Richmond
5th District: Dr. Louis P. Bailey, Nathalie
7th District: Dr. Harold W. Miller, Woodstock
9th District: Dr. James P. Williams, Richlands

The nominations were adopted unanimously.

Election of a Vice-Speaker for the House of Delegates was next in order and Dr. Allen Barker was elected to that office.

Nominations for a delegate to the American Medical Association were next in order, and it was announced that the term of Dr. J. Morrison Hutcheson would expire December 31. Elected as delegate was Dr. W. Linwood Ball. Dr. Kinloch Nelson was chosen as Alternate.

Dr. Rufus Brittain, representing the Virginia Academy of General Practice, placed in nomination the names of Dr. Mary Elizabeth Johnston, Tazewell, and Dr. Ira L. Hancock, Creeds, for General Practioner of the Year in Virginia. When the balloting was concluded, the Speaker announced that Dr. Johnston had been elected to that honor. Dr. Hancock then moved that the vote be unanimous. The motion was adopted.

Dr. Hundley announced the following nominations for the State Board of Medical Examiners:

3rd District: Dr. Emily Gardner, Richmond
Dr. Donald S. Daniel, Richmond
Dr. W. T. Thompson, Richmond
4th District: Dr. Fletcher J. Wright, Jr., Petersburg
Dr. W. Holmes Chapman, Jr., Suffolk
Dr. A. Tyree Finch, Farmville

The following resolution was then presented by Dr. Mallory Andrews, and was adopted unanimously:

RESOLVED, the the House of Delegates of The Medical Society of Virginia take recognition and express appreciation of the tremendous job which has been accomplished by our host, the Richmond Academy of Medicine, and the Local Committee on Arrangements in connection with this 108th Annual Meeting.

Be It Further Resolved, that this body express appreciation to the Staff of the Hotel Jefferson for its cooperation in helping to make this Meeting an outstanding success.

Dr. W. C. Salley then offered the following resolution, which was adopted:

Resolved That Council be instructed to have prepared before the next Annual Meeting, special rules of procedure considered applicable to the conduct of the business of the House of Delegates; that the proposed rules be mimeographed and mailed to each delegate prior to the date of the Meeting; that those rules be presented for adoption as the first order of business of each annual session of the House of Delegates; that the Council review the rules between each annual session and submit at the next session whatever changes or amendments are considered advisable.

Rising votes of thanks were accorded the Speaker of the House and the Richmond physicians who were hosts to the meeting.

There being no further business, the House of Delegates was declared adjourned.

Robert I. Howard
Executive Secretary

Approved:
Carrington Williams, M.D., President

Life Members—Fifty Year Club—1955

Dr. Richard Phillips Bell, Staunton
Dr. Richard Alfred Bennett, Lynchburg
Dr. Micajah Boland, London Bridge
Dr. Henry Arthur Bonynge, Gordonsville
Dr. Kenneth Bradford, Staunton
Dr. Rhodric W. Browne, Johnson City, Tennessee
Dr. Joseph Dorsey Collins, Portsmouth
Dr. Clarence Cameron Kress, Orange
Dr. George Bilton Lawson, Roanoke
Dr. Claude Marshall Lee, Warsaw
Dr. James Mortimer Lynch, Raleigh, North Carolina
Dr. Levin Freeland Magruder, Portsmouth
Dr. Moir Saunders Martin, Mt. Airy, North Carolina
Dr. Dibrel Crowder Mayes, Church Road
Dr. Monsey Edgar Mease, Sandy Level
Dr. Ben James Montgomery, Alberta
Dr. Clarence Vernon Montgomery, South Hill
Dr. Alexander Eston Murray, Beaver Dam
Dr. Robert Lee Payne, Norfolk
Dr. Cullen Pitt, Richmond
Dr. Edward Henderson Richardson, Baltimore, Maryland
Dr. Walter Gordon Trow, Warrenton
Dr. Douglas VanderHoof, Richmond
Dr. Foy Vann, Norfolk
Dr. James Walker Walters, Lynchburg

Members Whose Deaths Have Been Reported Since 1954 Meeting

Dr. John Willis Abbitt, Portsmouth, September 26, 1955
Dr. Coleman Douglas Bennett, Chatham, August 19, 1955
Dr. Isaac Alexander Bigger, Richmond, January 27, 1955
Dr. Wilbur Morrison Bowman, Petersburg, May 6, 1955
Dr. Charles Clay Carr, Pennington Gap, September 29, 1955
Dr. Michael Price DeBoe, Miami, Florida, June 29, 1955
Dr. Roderick Dew, Woodford, July 1, 1955
Dr. William Brown Dudley, Martinsville, November 3, 1954
Dr. Frederick Oliver Fay, Norfolk, November 13, 1954
Dr. Oscar Richard Fletcher, Sanford, June 14, 1955
Dr. Arthur Marion Gates, Ararat, July 4, 1955
Dr. Clabe Baker Greear, Honaker, May 29, 1955
Dr. Percy Harris, Scottsville, February 4, 1955
Dr. Frederick Melville Horsley, Arrington, May 11, 1955
Dr. William H. Howard, Ashboro, North Carolina, 1954 (Date unknown)
Dr. Thomas Jefferson Hughes, Roanoke, March 19, 1955
Dr. George August Leonard Kolmer, Salem, November 21, 1954
Dr. Joseph Barkley Lacy, Nathalie, August 13, 1955
Dr. Frank McConnell Leech, Lexington, August 9, 1955
Dr. Richard Hawes Manson, McKenney, July 3, 1955
Dr. James Edward Marable, Newport News, November 27, 1954
Dr. Henry Page Mauck, Richmond, January 22, 1955
Dr. Philip St. Leger Moncure, Norfolk, September 24, 1955
Dr. William Richard Morton, Richmond, January 30, 1955
Dr. Samuel Henry Nixon, Christiansburg, March 11, 1955
Dr. Henry Webster Patton, Hartwood, February 6, 1955
Dr. Seth Bridgman Perry, Hopewell, June 21, 1955
Dr. Robert Henley Pretlow, Suffolk, March 12, 1955
Dr. Walter Stefan Schiff, Marion, January 31, 1955
Dr. James Thomas Shelburne, Critz, December 25, 1955
Dr. John Walter Simmerman, Roanoke, May 25, 1955
Dr. Nash P. Snead, Cartersville, July 7, 1955
Dr. Henry Adams Tabb, Gloucester, January 7, 1955
Dr. Earley Thomas Terrell, Jr., Richmond, July 17, 1955
Dr. Thomas K. Terrell, Lynchburg, June 4, 1955
Dr. John Thurston Thornton, Charlottesville, May 30, 1955
Dr. Edmund Chitwood Watson, Roanoke, February 22, 1955
Dr. William Johnson West, State Farm, November 22, 1954
Dr. Rooker John White, Keller, January 5, 1955
Dr. Elbert Patton Whited, Honaker, January 23, 1955

Amendments

The following amendment to the Constitution of The Medical Society of Virginia was adopted and ratified during the recent Annual Meeting. Amend Article VIII to read as follows:

"Article VIII—Standing Committees and Editorial Board

The Standing Committees of the Society shall be (1) Scientific Exhibits and Clinics, (2) Postgraduate Medical Education, (3) Legislation, (4) Medical Service, (5) Membership, (6) Ethics, (7) Judicial, (8) Public Relations, (9) Mediation, (10) Program, and (11) Finance.

There shall be an Editorial Board for the official publication of the Society, which hoard shall he considered as one of the standing committees of the Society."

(The purpose of the amendment is to change the name of the Grievance Committee to Mediation Committee, and to suhstitute an Editorial Board for the present Publication Committee).

The following amendments to the By-Laws of The Medical Society of Virginia were also adopted during the Annual Meeting.

ARTICLE II

Section 3. Amend last sentence to read "Any member over seventy (70) years of age upon his request may be exempt by the Executive Secretary-Treasurer provided he has been a member in good standing for the previous ten years."

ARTICLE IV

Section 7. At the end of the section strike out the words "Publication Committee" and insert in lieu thereof "Editorial Board."

(This is merely a conforming change.)

ARTICLE VI

Section 4. Amend Section 4 to read as follows:

"Section 4. The House of Delegates shall at each annual session elect three vice-presidents to rank accordingly, these as far as possible to represent the various sections of the State. The House of Delegates shall also elect a Speaker and a Vice-Speaker to take office at the next annual meeting and to serve for terms of two years each. Successors to the office of Speaker and Vice-Speaker shall be elected by the House of Delegates for like terms. In the event of a vacancy occurring in the office of Speaker or Vice-Speaker the President shall appoint a successor to serve through the next annual meeting, at which meeting the House of Delegates shall fill the office for the unexpired term or the new term as the case may be. The Vice-Speaker shall preside over the House of Delegates in the absence of the Speaker, but shall have no vote unless he is a member of that body.

(The purpose of the amendment is to provide a Vice-Speaker for the House of Delegates and to prescribe his duties).

ARTICLE IX—STANDING COMMITTEES

Amend the first two paragraphs of the section to read as follows:

"The Standing Committees of the Society shall consist of an Editorial Board for the official publication of the Society, and additional Committees as follows:

(1) Scientific Exhibits and Clinics.
(2) Postgraduate Medical Education.
(3) Legislation.
(4) Medical Service.
(5) Membership.
(6) Ethics.
(7) Judicial.
(8) Public Relations.
(9) Mediation.
(10) Program.
(11) Finance.

"Each of these Committees with the exception of the Committees on Postgraduate Medical Education, Medical Service, Legislation, Puhlic Relations, Mediation and Finance shall consist of three members, whose term of office shall be three years. Successors to the members who have first heen appointed for one, two and three years shall be appointed for three years by the incoming President who shall also name the chairman of each Committee."

(The purpose of this amendment is to change the former Publication Committee to the Editorial Board, and to change the name of the Grievance Committee to the Mediation Committee).

Section 1. Strike out present Section 1 and insert in lieu thereof the following:

"Section 1. The Editorial Board shall consist of nine members, appointed by the President at the annual session at which he assumes the office of President. The members of the board shall be appointed as follows: three for one year, three for two years, and three for three years, and their successors shall be appointed for terms of three years each. Any vacancy on the Board shall be filled by the President for the unexpired term. The Board shall conduct the affairs of the official publication of the Society in accordance with the expressed policy of the Society and its budget for the current year.

"The President shall appoint an Editor for the official publication of the Society for the ensuing year, such appointment to be made upon recommendation of the Editorial Board, but the President shall not be required to appoint the person so recommended. The Editor may attend the meetings of the Council and the House of Delegates, and shall have the privilege of the floor in these bodies."

(The purpose of this amendment is to substitute an Editorial Board for the present Puhlication Committee, and to prescribe the duties of such board).

Section 10. Strike out the word "Grievance" wherever it appears in the section and substitute in lieu thereof the word "Mediation."

(The purpose of this amendment is to conform the of the present Grievance Committee to Mediation Committee).

ARTICLE X

Strike out the words "Publication Committee" and insert in lieu thereof the words "Editorial Board."

(The purpose of this amendment is to conform the Article to other changes made in the By-Laws).

Report of Committee On Cerebral Palsy

The Cerebral Committee reports a gradually increasing interest and development of meeting the problem of the care and management of cerebral palsy in the State of Virginia. A number of new treatment facilities have been activated during the past year. The Committee feels that the matter of cerebral palsy is one that should receive the attention of the State Public Health Service in assuming a more active role in the development and training of personnel to equip the facilities in the State to properly handle cases that are in the indigent group. At present there is provision from State funds to hospitalize and treat palsy cases that require orthopedic care, but a going clinic located in a number of strategic areas in the State would adequately meet the problem provided the

personnel were available and could carry on a continuing program of treatment. The clinics at the preesnt time are receiving support from lay organizations. Perhaps the additional support from the State could be pooled with resources that are raised by the law groups and the entire program be coordinated under the State Health program from the professional standpoint.

WALTER O. KLINGMAN, M.D., *Chairman*
J. HAMILTON ALLEN, M.D., Charlottesville
GEORGE A. DUNCAN, M.D., Norfolk
O. ANDERSON ENGH, M.D., Alexandria
LOUISE F. GALVIN, M.D., Richmond
ROY M. HOOVER, M.D., Roanoke

American Medical Education Foundation

On January 23, 1955 your committee chairman attended the National Meeting of the Committee Chairmen held in Chicago. There was an exchange of ideas as to the best methods of raising funds for the A.M.E.F., all of which boiled down to the importance of an educational program to convince the physicians the importance of supporting the Foundation.

On February 24, 1955, your committee met at The Medical Society of Virginia headquarters in Richmond. A plan was formulated whereby each committee member would carry the message of the A.M.E.F. to his local medical society. This has been done by most of the committeemen. Data on A.M.E.F. has been sent out to all practicing physicians from the National Headquarters. As the last of the year has in the past proven to be the best time for collecting, next month we plan to send a letter to each member of The Medical Society of Virginia as a reminder.

Our contributors to date have not been as many as we had hoped for, however, from January 1, 1955 to August 31, 1955 contributions amounted to $4,855.00, of this $2,000.00 was a special contribution from The Medical Society of Virginia.

The Committee has sponsored several articles in the Virginia Medical Monthly explaining the importance of our support of the A.M.E.F., and how our medical schools have benefited, making it unnecessary for encroachment by the federal government.

The Committee at this time wishes to thank the physicians who are helping to make this a successful year for A.M.E.F.

RICHARD A. MICHAUX, M.D., *Chairman*
MALLORY S. ANDREWS, M.D.
T. S. EDWARDS, M.D.
H. HASKINS FERRELL, JR., M.D.
MARCELLUS JOHNSON, III, M.D.
JOHN R. MAPP, M.D.
WALTER McMANN, M.D.
WILKINS J. OZLIN, M.D.
R. C. POTTER, M.D.
CHESTER L. RILEY, M.D.
A. ERSKINE SPROUL, M.D.
J. P. SUTHERLAND, M.D.
NORMAN R. TINGLE, M.D.
CLYDE W. VICK, JR., M.D.
CARRINGTON WILLIAMS, JR., M.D.
J. EDWARD WARREN, M.D.

Report of Publication Committee

The composition of the Virginia Medical Monthly remains essentially unchanged since last year. The Editorial Board has continued to assist the Editor and the Publication Committee in its work. It is the opinion of this Committee that the responsibility of the Editorial Board should be strengthened in the future.

Circulation to the Journal now numbers 2,945 which represents an increase over last year's figure of 103.

LLOYD B. BURK, JR., M.D.
A. BROWNLEY HODGES, M.D.
LEWIS H. BOSHER, JR., M.D.

Poliomyelitis Committee

The Poliomyelitis Committee of The Medical Society of Virginia acting as the Poliomyelitis Advisory Committee to the Virginia State Department of Health, met with the Health Department on Wednesday, September 14, 1955 at the request of the State Health Commissioner, Dr. Mack I. Shanholtz.

It was recommended that the Virginia State Health Department proceed with the second innoculation of the Poliomyelitis Vaccine as had been recommended by the National Foundation for Infantile Paralysis to those who have already received their first innoculation.

Furthermore, it was recommended that as more vaccine accumulates they proceed with the immunization of the 5-9 age year group against Poliomyelitis.

The following suggestions were made:

A. Patients seen in private practice who are unable to pay for the administration of vaccine will be given vaccine free of charge.
B. Patients seen in private practice who are able to pay for the administration of vaccine will be given the vaccine free but will be charged for the administration.
C. Private physicians receiving the vaccine free of charge will agree to submit identification data on all cases to whom the vaccine is administered and to limit the administration to the priority age groups established by the public agency (the present being 5-9 years.).
D. Persons unable to pay for poliomyelitis vaccine may also receive the vaccine at Public Health Clinics organized for this purpose at which no means test will be used to determine the person's ability to pay.

At the present time the Virginia State Health Department is carrying out its program for immunizations against Poliomyelitis as recommended by the Poliomyelitis Committee.

McLEMORE BIRDSONG, M.D.
E. A. HARPER, M.D.
ROBT. C. HOOD, M.D.
ROY M. HOOVER, M.D.
MASON ROMAINE, *Secretary*, M.D.
LEE E. SUTTON, JR., M.D.
Chairman, Poliomyelitis Committee,
Medical Society of Va.

Report of the Program Committee

The program committee wishes to thank Dr. Carrington Williams and Dr. Benjamin W. Rawles for their aid

and advice. We would also like to thank Dr. Ernest Carpenter for his aid in arranging the Wednesday afternoon section.

Most of all, we wish to express our appreciation for the great help given by our executive secretary, Mr. Robert Howard, without whose help the program would never have been arranged. We are very grateful to him.

We have one change in the program to announce. Dr. Robert A. Ross of Chapel Hill, North Carolina, due to his sudden illness, will not be able to attend the meeting, and his paper will be read by Dr. Leonard Palumbo, Assistant Professor of Obstetrics, University of North Carolina School of Medicine, Chapel Hill, North Carolina.

Ira L. Hancock, M.D.
Elam C. Toone, Jr., M.D.
George B. Craddock, M.D., *Chairman*

AUDITOR'S REPORT

Officers and Councilors
The Medical Society of Virginia
Richmond, Virginia
Gentlemen:

We have made an examination of the books and records of The Medical Society of Virginia, Richmond, Virginia, for the fiscal year ended September 30, 1955, and have prepared therefrom the Balance Sheet, Exhibit "A", and Statement of Income and Expenses, Exhibit "B". With the exceptions noted in the immediately following paragraph, our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

We did not verify the accounts receivable by direct correspondence with the debtors, nor did we verify the accounts payable. It will be noted from the balance sheet that the amounts of these items are not material in relation to the financial position as a whole.

It is our opinion that the Balance Sheet, Exhibit "A", presents fairly the financial position of the Society at September 30, 1955, in accordance with generally accepted principles of accounting. The Statement of Income, Exhibit "B", is prepared on a basis of cash actually received and disbursed.

Yours very truly,
Mitchell, Wiggins & Smith
By J. Sydnor Mitchell
Certified Public Accountant

Financial Condition

The financial condition of the Society at September 30, 1955 is shown in the Balance Sheet, Exhibit "A", on the accrual basis. A summary thereof is presented as follows in comparison with the financial condition for the two preceding years:

	9-30-55	9-30-54	9-30-53
Assets			
Cash	$ 71,316.46	$ 55,308.33	$ 48,583.79
Acounts receivable	3,409.64	2,531.57	2,264.12
Investments	46,081.03	43,134.02	41,851.50
Land, buildings and equipment	43,061.10	43,061.10	43,061.10
Total—All Funds	$163,868.23	$144,035.02	$135,760.51
Liabilities, Surplus and Fund Balance			
Liabilities:			
Accounts payable	$ 1,883.55	$ 1,323.02	$ 1,443.20
Surplus:			
General Fund	118,923.58	99,650.90	91,256.21
Fund Balance:			
Plant Fund	43,061.10	43,061.10	43,061.10
Total—All Funds	$163,868.23	$144,035.02	$135,760.51

Analyses and explanation of the more important balance sheet items follow:

Cash—$71,316.46

Recorded cash receipts were accounted for by deposits in the banks and disbursements were supported by properly signed and endorsed paid checks. Balances on deposit at September 30, 1955 were confirmed by direct correspondence with the banks as follows:

First and Merchants National Bank—Checking account	$43,227.77
First and Merchants National Bank—Savings account	6,949.90
The Bank of Virginia—Savings account	40.92
Southern Bank and Trust Company—Savings account	1,062.46
Franklin Federal Savings and Loan Association—Savings account	10,010.41
Richmond Federal Savings and Loan Association—Savings account	10,025.00
Total	$71,316.46

Investments—$46,081.03

United States Savings Bonds, as shown in Schedule 1, were verified by inspection of the securities held in a safe deposit box at First and Merchants National Bank, Richmond, Virginia. They are shown in the Balance Sheet at their current redemption value.

Certificates of deposit were verified by direct correspondence with the Bank of Virginia.

Fixed Assets—$43,061.10

Details of the fixed assets carried in the Plant Fund are shown in Schedule 2. No indebtedness against these assets was disclosed by the records.

Operations

The income and expenses for the fiscal year ended September 30, 1955 are shown in Exhibit "B", prepared on the cash receipts and disbursements basis. A summary of income and expenses in comparison with that of the two preceding years is presented as follows:

	Fiscal Year Ended		
	9-30-55	9-30-54	9-30-53
Income			
Membership dues	$48,923.83	$46,028.26	$45,754.91
Medical monthly publication	21,674.26	20,075.39	17,835.74
Other income	1,825.64	543.93	708.98

TOTAL	$72,423.73	$66,647.58	$64,299.63
EXPENSES			
Executive office	$51,037.80	$58,106.62	$53,573.12
Public relations department	2,397.80	1,816.42	2,351.06
TOTAL	$53,435.60	$59,923.04	$55,924.18
INCOME OVER EXPENSES	$18,988.13	$ 6,724.54	$ 8,375.45

IN GENERAL

The bookkeeping records were found to have been kept in a satisfactory manner.

Insurance in force at September 30, 1955, determined from policies on file, was as listed below:

FIRE	
Office furniture and fixtures	$ 6,000.00
Building—1105 West Franklin Street, Richmond, Virginia	26,000.00
Walter Reed House, Belroi, Virginia	2,000.00
LIABILITY—OWNER'S, LANDLORD'S, AND TENANT'S	
Bodily injury	$25,000.00 - $50,000.00
Property damage	5,000.00
FIDELITY BONDS	
Executive Secretary-Treasurer	5,000.00
Secretary	5,000.00

BALANCE SHEET

September 30, 1955

ASSETS

GENERAL FUND		
Cash in banks		$71,316.46
Accounts receivable:		
Due from members—Estimated collectible value—1955 dues—50 @ $25.00	$ 1,250.00	
Advertising—Virginia Medical Monthly	2,159.64	3,409.64
Investments:		
United States Savings Bonds—Present value (Schedule 1)	$36,228.00	
Certificates of deposit—Bank of Virginia	9,853.03	46,081.03
		$120,807.13
PLANT FUND		
Land and Buildings—At cost (Schedule 2)		$ 35,061.10
Furniture and Equipment: (Schedule 2)		
Estimated value October 1, 1950	$ 7,048.35	
Cost of acquisitions since October 1, 1950	951.65	8,000.00
		$ 43,061.10

EXHIBIT "A"

LIABILITIES AND SURPLUS

GENERAL FUND		
Accounts payable:		
Preparation of Medical Journal—September 1955		$ 1,883.55
Surplus:		
Balance October 1, 1954	$ 99,650.90	
Add: Net cash income (Exhibit "B")	18,988.13	
Increase in accounts receivable	878.07	
Increment in Certificate of deposit	165.01	
TOTAL	$119,682.11	
Deduct: Increase in accounts payable $560.53		
Bond interest adjustment 198.00	758.53	
Balance—September 30, 1955		$118,923.58
		$120,807.13
PLANT FUND		
Surplus invested in plant assets		$ 43,061.10
		$ 43,061.10

STATEMENT OF INCOME AND EXPENSES

For the Fiscal Year Ended September 30, 1955

EXHIBIT "B"

	ACTUAL	BUDGET
GROSS INCOME		
Membership dues	$48,923.82	
History of Medicine in Virginia	59.00	
Interest on investments	1,436.85	
American Medical Association	329.79	
Virginia Medical Monthly:		
Advertising	$21,352.73	
Subscriptions—Non-members	321.53	21,674.26
TOTAL	$72,423.73	
EXPENSES		
Executive office:		
Salaries	$21,277.54	$23,000.00
Telephone and telegrams	1,136.03	1,500.00
Postage	606.32	650.00
Stationery and office supplies	765.91	750.00
Office equipment—Repairs and replacements	1,131.27	1,300.00
Building maintenance and repairs—Net	1,916.81	2,500.00
Convention expenses—Net	(2,683.16)	1,000.00
Council expenses	82.73	300.00
Delegates and executive assistant to A.M.A.	781.54	2,200.00
President's expenses	155.82	1,000.00
Traveling expenses	1,376.08	2,000.00

Preparation and distribution of Medical Journal	18,321.32	18,500.00
Scientific exhibits	112.50	2,500.00
Department of clinical and medical education		1,000.00
Legislative Committee	600.00	1,000.00
Walter Reed Commission	19.80	400.00
Miscellaneous health service committees	100.09	650.00
Woman's auxiliary	32.28	100.00
Membership dues — Affiliated agencies	140.00	150.00
Special appropriations:		
Virginia Council Health and Medical Care	2,000.00	2,000.00
American Medical Education Foundation	2,000.00	2,000.00
National Society Medical Research	150.00	150.00
Student American Medical Association	200.00	200.00
National Conference Physicians and Schools		80.00
Miss Agnes V. Edwards Memorial	140.00	150.00
Social security taxes	352.72	375.00
Miscellaneous	322.20	500.00
TOTAL—EXECUTIVE OFFICE	$51,037.80	$65,955.00
Public Relations Department:		
Conference expenses	$ 811.54	$ 750.00
Radio and press	379.69	500.00
Literature and bulletins	793.57	1,250.00
Exhibits	10.00	150.00
Public relations booklet	403.00	350.00
TOTAL—PUBLIC RELATIONS DEPARTMENT	$ 2,397.80	$ 3,000.00
TOTAL EXPENSES	$53,435.60	$68,955.00
EXCESS OF INCOME OVER EXPENSES	$18,988.13	

FIXED ASSETS
September 30, 1955

SCHEDULE 2

PLANT FUND

LAND AND BUILDINGS—At cost		
Walter Reed House, Belroi, Virginia		$ 1,000.00
Office building—1105 West Franklin Street, Richmond, Virginia		34,061.10
TOTAL LAND AND BUILDINGS		$35,061.10
OFFICE FURNITURE AND EQUIPMENT		
Estimated insurable value at October 1, 1950		$ 7,048.35
Purchased during year ended September 30, 1950:		
Adding machine	$100.00	
Addressograph—Multigraph stand	127.50	
Protectograph—Check writer	110.30	
Typewriter	156.20	
File cabinets (2)	71.50	
Vacuum cleaner	69.95	
Desks and chairs (2)	316.20	951.65
TOTAL OFFICE FURNITURE AND EQUIPMENT		$ 8,000.00
TOTAL FIXED ASSETS		$43,061.10

INVESTMENT BONDS
September 30, 1955

SCHEDULE 1

BONDS	SERIES	NO. BONDS	DATED	DUE	VALUE AT MATURITY	COST	VALUE AT 9-30-54	VALUE AT 9-30-55
U. S. Savings	F	17	12-1-43	12-1-55	$ 8,500.00	$ 6,290.00	$8,032.50	$ 8,330.00
U. S. Savings	F	1	1-1-44	1-1-56	500.00	370.00	472.50	490.00
U. S. Savings	F	3	2-1-44	2-1-56	1,500.00	1,110.00	1,417.50	1,470.00
U. S. Savings	F	2	6-1-44	6-1-56	1,000.00	740.00	929.00	962.00
U. S. Savings	F	2	12-1-44	12-1-56	1,000.00	740.00	914.00	945.00
U. S. Savings	F	2	5-1-45	5-1-57	1,000.00	740.00	900.00	929.00
U. S. Savings	F	7	11-1-45	11-1-57	7,000.00	5,180.00	6,209.00	6,398.00
U. S. Savings	F	1	3-1-46	3-1-58	500.00	370.00	443.50	457.00
U. S. Savings	F	10	3-1-46	3-1-58	10,000.00	7,400.00	8,870.00	9,140.00
U. S. Savings	F	6	10-1-49	10-1-61	3,000.00	2,220.00	2,358.00	2,427.00
U. S. Savings	J	13	5-1-55	5-1-67	6,500.00	4,680.00		4,680.00
TOTALS					$40,500.00	$29,840.00		$36,228.00

(Exhibit "A")

Book Announcements . . . .

Should The Patient Know The Truth. A Response of Physicians, Nurses, Clergymen, and Lawyers. Edited by SAMUEL STANDARD, M. D., and HELMUTH NATHAN, M. D. Springer Publishing Company, New York. 1955. 160 pages. Cloth. Price $3.00 (Hard Cover) or $2.00 (Soft Cover).

Almost everyone and particularly those persons who professionally minister to the physical and spiritual needs of the sick will inevitably think over the pros and cons of facing the plain truth with the critically ill. Reflecting the complexity and the poignancy of this question, the editors of this book present twenty-three short chapters by different ecclesiastical, medical and juridical practitioners. The precepts, facts and ideals presented represent the practical bases upon which these practitioners formulate their policies in advising, serving and caring for the sick. The authors cite ancient and modern sources all the way from Talmudic law to modern poetry. Various authors emphasize the different needs of patients according to creed, state of awareness, character, emotional and mental habits, and age as well as physical condition. Legal matters, economic and financial implications as well as spiritual necessities are discussed as additional considerations in deciding whether to advise one of imminent death or fatal disease.

Evidently there is no "canned" answer to the question, "Should the Patient Know the Truth", because of the myriad of details involved in the doctor-patient relationship and in the relations of the patient to his family and community. However, it seems that anyone who will examine the thinking and experience noted in this short, readable book will possibly get a chance to observe some of his past errors and in addition find new and satisfactory answers to use as guides in settling this question.

This reviewer was particularly impressed by the originality and excellence of contributions by members of the nursing profession.

A. W. Moser.

Hormone Controls Bleeding.

Estrogen, a female hormone, may be the solution to two common medical emergencies—profuse nose bleeds, and severe hemorrhages following removal of adenoids. Many schemes of therapy have been recommended, but finding " a simple, reliable solution" to these problems "has taxed the ingenuity of the medical profession." Just why estrogen, first used to control bleeding from the womb, stops nose bleeds and post-adenoidectomy hemorrhages is not known. The physician hopes that future studies will tell why and also will lead to use of the hormone in other types of bleeding.

Dr. Harold C. Menger of the Evangelical Deaconess Hospital, Brooklyn, N. Y., reported the "dramatic" response of 16 patients to the treatment in the October 8 Journal of the American Medical Association.

Current methods of treatment for spontaneous nose bleeds are successful in some cases. But other cases resist any attempted therapy and stop "as enigmatically as they begin." Spontaneous bleeding after removal of adenoids usually can be controlled with nasal packing. However, in occasional cases it is not effective, in many it is difficult and complicated, and in all it is time consuming.

Estrogen, when given intravenously or intramuscularly, stopped both types of bleeding within one hour in all but two of Dr. Menger's cases. Those two cases were controlled within three hours. There were no side effects from the hormone.

These hemorrhages often cease spontaneously, but the uniform results and quick responses in these cases rule out the possibility of spontaneous stoppage and of coincidence.

President's Message . . . .

Important Legislation

DURING the first session of the present Congress over 400 bills pertaining to medicine or medical health were dropped into the hopper. The A.M.A. took a definite stand, for or against, a number of these bills. It is of interest to observe the fate of two bills opposed by the medical profession. The Doctor-Draft proposal again became law over the vigorous protest of the A.M.A. This marked the first time in our history that any single group has been induced involuntarily into military service in the absence of a national emergency.

Another serious defeat was received when the House voted overwhelmingly for HR-7225, amending Title II of the Social Security Act. This Bill was not subjected to the time-honored practice of public hearings and was brought to the floor of the House under "gag rule," which allowed only 20 minutes for each side, permitting no amendments or alterations. Should HR-7225 become law, it will increase taxes upon employers and wage earners an estimated $2 billions annually.

The section lowering the age from 65 to 50 for those eligible to receive government cash disability benefits is the most significant part of the proposed legislation from the standpoint of the medical profession. It is believed that this provision for permanent and total benefits would place the government squarely into the practice of medicine, involving a large segment of private practitioners and the interjection of a third party between the physican and his patient. Our best advisors believe that we are faced today with a more serious threat of socialization of our profession than at any time since the all-out campaign to defeat the Wagner-Murray-Dingell bill in 1949-50.

Because of our lack of knowledge and understanding of the ultimate consequences of HR-7225 we are, perhaps, in even more jeopardy than we were in 1949-50.

The Medical Society of Virginia has always enjoyed the friendship and sympathetic understanding of medical problems and medical legislation of the Virginia delegation in Congress. But like all successful politicians our representatives have apparently obeyed the temptation to follow the trend towards social legislation with more thought to the vote-getting appeal of the legislation than to serious consideration of its ultimate effect. All but three of our Representatives in Congress voted for HR-7225 —Messrs. Smith, Robeson and Tuck dissenting. Mr. Hardy not voting.

It is obvious that we in Virginia must set about to properly inform our legislators of our viewpoint. We must bring our influence upon our Congressmen in whatever manner possible—by personal interview, by letter or, indirectly, through others. We should solicit other groups to do likewise.

May I suggest that you obtain from the A.M.A. a copy of its recent pamphlet, "Social Security", and carefully study the existing provisions and the proposed extensions of the Social Security Laws?

Fortunately, Senator Byrd postponed action by the Senate on HR-7225 until January when Congress reconvenes, at which time adequate hearings will be made before his Committee. A.M.A. representatives will be there to present medicine's side of this important legislation but our Congressmen will be much more interested in what you and I think about HR-7225 and its far-reaching effect upon the private practice of medicine.

James P. King

President

Editorial....

The Annual Meeting

IT IS MAN'S very nature to take most things for granted—especially the good things. The recent Annual Meeting, it seems to us, was one of those good things, and we should like to point out a few reasons why it was particularly outstanding.

The meeting saw a new attendance record established. The total registration was 1,219, of which 867 were physicians. Certainly there can be no complaint with those figures, although we often wonder if those members, who for some reason, "couldn't make it" really know what they missed.

Most important, of course, were the well arranged scientific programs and the array of scientific and technical exhibits. It can be said, without fear of contradiction, that the exhibits this year achieved a new high in quality and appeal.

Mr. C. P. Loranz, Advisor and Professional Relations Counselor of the Southern Medical Association, wrote "I have been to a number of State meetings this year, as well as over the years, and I do not recall seeing as large and as splendid a scientific exhibit at a State meeting as you had."

It is, therefore, easy to understand why winners of Scientific Exhibit awards deserve special recognition and hearty congratulations. They were: First Award—Application of Vascular Grafts—Lewis H. Bosher, Jr., M.D., and Alfred M. Decker, Jr., M.D., Richmond. Second Award—Radioactive Iodine in the Diagnosis of Thyroid Disease—K. R. Crispell, M.D., Guy Hollifield, M.D., William Parson, M.D., and Gerald Williams, M.D., Charlottesville. Third Award—Heart Disease and the Pulmonary Vascular Bed—J. Francis Dammann, Jr., M.D., and William M. Muller, Jr., M.D., Charlottesville.

The House of Delegates held its usual busy sessions. Great credit is due this body which diligently reviews Society policy and progress, and charts its future course.

Annual Meetings are not all work, however, and fifteen Alumni and specialty groups held dinners or luncheons. The renewing of old acquaintances and "catching up" on the news are activities which add zest to any Annual Meeting.

Each Annual Meeting has its share of unusual events—sometimes amusing and sometimes startling. For example, who would believe that members from South Hill would attempt, by every conceivable means, to carry home all three Smithfield Hams awarded as technical exhibit registration prizes? Yet that is exactly what happened, and only a "last ditch" draw made it possible for Dr. W. Fleming Gill, Richmond, to wrest the last ham from a South Hill group led by Dr. Wilkins J. Ozlin and Dr. L. H. Bracey, the other winners!

It is only natural and proper that we plan to make each Annual Meeting "bigger and better". It would appear, however, that the 1955 Meeting has left a pretty good mark at which to shoot.

Society Proceedings . . . .

Loudoun County Medical Society.

The following are officers of this Society for the year 1956: President, Dr. John D. Wynkoop, Leesburg; vice-presidents, Dr. Samuel S. Morrison, Leesburg, and Dr. Priscilla M. Foot, Purcellville; and secretary-treasurer, Dr. Robert A. Orr, Leesburg.

The Northern Neck Medical Association

Met at Colonial Beach on October 27th. Dr. A. B. Gravatt, Jr., Kilmarnock, was installed as president. Dr. Spottswood Stoddard, White Stone, was named president-elect and Dr. Martel Dailey, Reedsville, secretary-treasurer.

Richmond Academy of Medicine.

At the meeting of the Academy on November 8th, Mr. Patrick Hayes of the Internal Revenue Service spoke on "Internal Revenue Act as Related to Physicians", and Mr. Arthur Shands, a certified public accountant, spoke on "The Physician's Office Records as Related to the Internal Revenue Act". A discussion period followed.

Dr. R. D. Butterworth is president of the Academy.

Williamsburg-James City Medical Society.

At the regular meeting on November 9th, Dr. Frederic P. Moore, Richmond, spoke on Prevention of Household Accidents to Children.

Virginia Peninsula Academy of Medicine.

At the meeting of the Academy on October 19th, Dr. John deJ. Pemberton, Emeritus Professor of Surgery at the Mayo Foundation, Rochester, was the speaker.

News . . . .

Tuberculosis—Is Not Under Control.

When one faces the simple fact that 47% of the deaths from tuberculosis in Virginia in 1954 were not reported as cases prior to death, need we go beyond this point to label tuberculosis as the most serious public health problem in Virginia?

This high percentage of unknown cases in the communicable stage, added to the known cases with positive sputum which remain unhospitalized in the State, give us a reservoir of infection which continues the dissemination of tuberculosis in every Virginia community.

A recent study in a major Virginia city brought forth this recommendation: "Finally, this group feels that some plan of action should be instituted to give the public a more realistic picture of the present status of tuberculosis as a public health problem. We feel that an altogether too optimistic picture of tuberculosis is being given to the laity, which if allowed to continue to snowball at the present rate, will completely wreck the tuberculosis control program in a short time."

Tuberculosis workers, official and volunteer, urge the medical profession to take a more active part in bringing the facts to the attention of the public. During the current Christmas Seal sale many physicians will be given the opportunity to speak in behalf of the campaign against this age old enemy of mankind. Many public health officials feel that this is perhaps the most critical period in the past fifty years.

Your purchase of Tuberculosis Christmas Seals will also help to provide funds for the education of people in your community regarding the true facts.

Dr. J. Morrison Hutcheson,

Announces the association of Dr. J. Morrison Hutcheson, Jr., in the practice of internal medicine and cardiology. Their offices are in the Professional Building, Richmond.

Dr. James J. Lawson,

Formerly of New Market, is now on the staff of the E. I. DuPont de Nemours Company at Wilmington, Delaware. He plans to limit his practice to occupational medicine.

The American College of Chest Physicians,

Potomac Chapter, held its eleventh annual meeting at The Greenbrier, White Sulphur Springs, W. Va., October 7th. The following officers were elected: president, Dr. Edmund G. Beacham, Baltimore; vice-president, Dr. Roy G. Klepser, Arlington; and secretary-treasurer, Dr. J. Winthrop Peabody, Jr., Washington.

Dr. A. I. Dodson,

Richmond, addressed the Maryland Academy of General Practice on October 26th. His subject was Treatment of Urinary Tract Infections.

Dr. B. K. Weems,

Waynesboro, has been elected president of the Fishersville Ruritan Club. He is now vice-president and will succeed to the presidency in January.

Virginia Council Receives Award.

The 1954 Lane Bryant Annual Award was presented to the Virginia Council on Health and Medical Care at a luncheon in New York City on November 17th. Edgar J. Fisher, Jr., director of the Council, was presented with a check for one thousand dollars and a plaque by Raphael Malsin, President of Lane Bryant, Inc. Established in 1948, the Lane Bryant Annual Awards were conceived to inspire and encourage voluntary participation in efforts that benefit the American home and community life.

Dr. David C. Wilson,

University of Virginia, was the speaker in the second of a series of lectures sponsored by the Waynesboro Unitarian Fellowship. His subject was Psychiatry in Modern Life.

Dr. Stuart Retires.

Dr. Emmett C. Stuart, Sr., Winchester, has retired, having been in practice for 68½ years. It is believed that he was in active practice longer than any doctors living in the United States. Dr. Stuart is ninety years of age and says he has no definite plans for the future. His son, Dr. Stuart, Jr., also practices in Waynesboro.

Dr. James C. Wickstrom

Has completed his three months' orientation in one of our city-county local health departments and has been assigned as Assistant to Dr. William Y. Garrett, Director of the Norfolk-Princess Anne-South Norfolk-Virginia Beach Health District.

Dr. W. H. Michael,

Director of the Isle of Wight-Nansemond-Suffolk-Southampton Health District for the past eight years, retired on October 1, 1955. Dr. H. D. Crow, formerly of Fredericksburg, has replaced him.

Florida Midwinter Seminar.

The Tenth Annual University of Florida Midwinter Seminar in Opthalmology and Otolaryngology will be held at the Sans Souci Hotel in Miami Beach the week of January 16, 1956. A midweek feature will be the Midwinter Convention of the Florida Society of Ophthalmology and Otolaryngology on the afternoon of the 18th, to which registrants are invited.

Complete information may be obtained from Dr. Shaler Richardson, 111 West Adams Street, Jacksonville, Florida.

Graduate Medical Assembly.

The nineteenth annual meeting of The New Orleans Graduate Medical Assembly will be held February 27-March 1, 1956, at the Municipal Auditorium, New Orleans. There will be guest speakers on all phases of medicine and surgery.

Following the Assembly, there will be a post-clinical tour to West Indies and Central America, leaving on the 2nd and returning the 24th.

Full information may be obtained from The New Orleans Graduate Medical Assembly, 1430 Tulane Avenue, Room 103, New Orleans 12, La.

American Board of Obstetrics and Gynecology.

The next scheduled examination (part I), written examination and review of case histories, for all candidates will be held in various cities of the United States, Canada, and military centers outside the continental United States, on February 3, 1956. Case abstracts numbering 20 are to be sent by the candidate to the Secretary as soon as possible after receiving notification of eligibility to the Part I written examination.

Resident Physician Needed.

The Penitentiary State Farm, 25 miles west of Richmond, needs a resident physician to direct the medical services afforded the inmate population (1100 males). Duties also involve medical services at the Industrial Farm for Women, Goochland. Construction is being started on a 3-bedroom brick house for the physician's use. Contact J. T. Moore, Jr., Personnel Supervisor, 429 South Belvidere St., Richmond. (*Adv.*)

Doctor's Office Available.

In building with eight doctors' offices located in very busy, large apartment community of 10,000, with an immediate surrounding area of 20,000 or more. A nose and throat specialist would obtain patients through other doctors in building. Sure to make good. Buckingham Community, 313 N. Glebe Road, Arlington 3, Virginia. (*Adv.*)

Practice for Sale or Rent.

New, modern, well introduced clinic in Floyd, with newest equipment, including 200 M.A. Westinghouse x-ray machine, diathermy, electrocardiograph, complete laboratory, (microscope, Roudy Photometer,

chemicals, etc.), 6-bed maternity hospital (licensed by the state) and with equipped delivery and operating rooms, including oxygen, anesthesia, resuscitation apparatus, etc.

The clinic is surrounded by two acres, well kept lawns, decorative and fruit trees and garden and private driveway with parking space for 24 cars.

Present owner will introduce his successor and leave all the records and files. If interested write or contact Dr. William S. Hitrec, Floyd County Clinic and Hospital, Floyd, Virginia. Phone—115. (*Adv.*)

General Surgeon

Desires association or solo practice in city with available hospital facilities. Board eligible, 34, category IV, university trained including sub-specialities. Available July 1956. Write #55, Care the Monthly, P. O. Box 5085, Richmond 20. (*Adv.*)

Wanted.

Psychiatric residents for approved one to three year training program in affiliation with medical school. Reply: Manager, VA Hospital, Roanoke 17, Virginia. (*Adv.*)

Obituaries . . . .

Dr. Henry Clay Corbett,

Arlington County's only doctor for about twenty years around the turn of the century, died October 7th at the age of ninety-six. He was a graduate of the former Columbian University, Department of Medicine, Washington, in 1883, and was the last surviving member of his class of ten. Dr. Corbett practiced for sixty-three years before his retirement, beginning his practice in Arlington County when there was only a few hundred residents. He received an honorary certificate from George Washington University citing him for his years of service to his profession. Dr. Corbett had been a member of The Medical Society of Virginia for sixty years and was a Life Member. Three children, three grandchildren and three great-grandchildren survive him.

Dr. Moncure

Dr. Phillip St. Leger Moncure, who died at his ancestral home in Caroline County, Virginia, on September 24, 1955 at age 87, was an active member of the Norfolk County Medical Society from 1897 until his retirement in 1950. His fifty-three years of practice in this city were marked by outstanding accomplishments in community, fraternal and professional circles.

A large clientele, unrestricted as to class, creed or color, made up his devoted patients. His most notable service to this community was rendered through the many years he was associated with St. Vincent Hospital as an active member of its attending and clinic staffs. It was to this institution that he came as interne after graduating from the Medical College of Virginia in 1897 and he remained its devoted friend and faithful worker throughout all of his professional career.

Fraternally, Dr. Moncure was very active in Masonic work having been a member of all the bodies, both York and Scottish Rite. He was honored by the Scottish Rite Bodies in the conferring upon him of the Thirty-third Degree and he was Almoner for that organization for many years.

Dr. Moncure's interest in his profession was attested by the active part he took in the operation and growth of its societies and his leadership was recognized when he was elected President of the Norfolk County Medical Society in 1911, The Medical Society of Virginia in 1936, and the Seaboard Medical Society in 1937. He was at all times an active member of the American Medical Association and was a delegate from this State in 1937. Dr. Moncure was a charter member of the American College of Surgeons having been present at its organization in Chicago in 1913.

For thirty years, he was a member of the State Board of Medical Examiners and his work on that Board was characterized by his ceaseless efforts in protecting the public from the activities of the cultists.

The Norfolk County Medical Society accepts the death of this prominent member with the sorrow that attends the passing of a beloved friend and honors the high traits of his character which made him a truly noble physician.

Be it resolved that this testimony concerning Dr. Philip St. Leger Moncure be incorporated in the records of this Society and a copy be sent to his bereaved family and the Virginia Medical Monthly.

C. C. Smith, M.D.
S. O. Bennett, M.D.
M. S. Fitchett, M.D.

Dr. Trice

Dr. Ernest Timoleon Trice was born January 18, 1888 in Petersburg, Virginia, the son of Philip J. Trice and Virginia Flanagan Trice. . . . . He died September 6, 1955 and was buried in Forest Lawn Cemetery, Richmond. He married Evangeline Palmer of Graham, Virginia. He is survived by her and their two sons; Dr. Robert Palmer Trice and Dr. Ernest Randolph Trice, Richmond; . . . .

When a young boy he moved with his parents to Cumberland County where the family engaged in farming and milling in the location since named "Trice's Lake."

His basic education was from the public schools and Fork Union Military Academy. His medical education was from the University College of Medicine (now the Medical College of Virginia) with graduation in 1911 and subsequent internship in the Virginia Hospital. He was associated with Dr. J. Lynn Dietrick, later with Dr. J. E. Warinner, both of Hanover County, and following this he was physician of Gayton Coal Mines, Henrico County. After this experience in general practice he became interested in surgery and was associated with Dr. Blanton L. Hillsman. He took postgraduate work at the Mayo Clinic in surgery of the thyroid gland. Following these years of training he opened offices for himself and practiced surgery until his fatal illness. His special interest was Traumatic Surgery in which field he enjoyed an extensive practice. He was the pioneer in this area in advocating early ambulation as an aid in postoperative management. Along with Leithauser, Shouldice and Carlson he braved the storm of criticism in advocating early ambulation as advocated by Ries more than 50 years before and later by Zova with a report of 6000 cases in 1940. He was the author of several papers published on this subject. One of them was read before this Academy January 14, 1947.

During World War I he was Lieutenant Senior Grade, Medical Corps, U. S. Navy. In World War II he was Medical advisor for the staff of the Virginia Selective Service with the rank of Lieutenant-Colonel of the Army Medical Corps. In that capacity he was charged with responsibility of seeing that the regulations of the Selective Service were properly applied in the selection of medical officers for the military services. He served on the State Prison Board from 1937 to 1948. Dr. Trice was appointed to the Governor's staff by Governor Pollard 1930 and reappointed by each succeeding Governor including Governor Stanley, serving continuously for 25 years. He was a member of the Virginia National Guard for 23 years and after his separation from the service December 29, 1945 he joined the Officers Reserve Corps and was retired April 1, 1953 as Lieutenant-Colonel.

Dr. Trice was elder of Ginter Park Presbyterian Church and was head of a committee that established East Laburnum Presbyterian Church. He took a deep interest in this new church and was teacher of the adult Bible Class which has been memorialized for him. He was frequently a guest teacher at other church Bible Classes and at the Y.M.C.A.

. . . .

Dr. Trice was keenly interested in horses and horsemanship and for many years was active in the affairs of the Deep Run Hunt Club. Knowing that horse manners are best developed at the walk he could be seen on most good afternoons casually proceeding up Richmond's "Rotten Row" (now Monument Avenue extension) training his own horses. His chestnut hunter, Soothsayer, was a good example of his skill in developing such horse manners and a pleasure type of horse. Because of his accuracy and impartiality he was for years most popular judge at horse shows.

Dr. Trice was endowed with a deep sense of sympathy for his fellow man. He was charitable in his attitude toward the weaknesses and failures of others, and a most loyal friend to those who knew him best. He was always ready to lend a helping hand to his weaker brother regardless of race or color.

THEREFORE, BE IT RESOLVED, by the Richmond Academy of Medicine, on this the 25th day of October, 1955 that we express our sincere and heartfelt sympathy to the bereaved family of our departed friend and colleague, to whom this memorial shall be sent, and a copy be made a part of the permanent records of this Academy.

MILTON C. RICHARDS
THOMAS BEATH
E. LATANE FLANAGAN, *Chairman*

Dr. Terrell

Gentlemen, let us pause briefly this evening to say a few words in honor of Dr. Early Thomas Terrell, Jr. The shock of his untimely death on July 17, 1955 is still fresh in our memory. Some of us will pause often, and with a more prolonged sense of personal loss, when we think of Dr. Terrell; but tonight, it is fitting only that we sketch briefly, for our records, the useful life of this kind and gentle doctor who was our friend.

Dr. Terrell devoted a quarter of a century, indeed, all of the years of his professional life, to the care of the mentally ill. Since institutional psychiatry is seldom dramatic, very little in the way of fortune or fame comes to those who devote their lives to it. It is not often that the praises of such men are sung by their professional colleagues. Recovered patients wish quickly to forget, not only their illness, but all who had anything to do with it. Ingratitude is the rule. Academic honors are rare and certainly the financial rewards are small. All that a psychiatrist working with chronic mental patients may hope for is the commendation of his close professional associates and the self-satisfaction that comes from knowing he had done the best he can with a very diffcult task.

Dr. Terrell was born on January 5, 1907, at Fredericks Hall, Louisa County, where he attended elementary school. After graduation from high school in Newport News he attended William and Mary College in Williamsburg, and eventually received his medical education and graduated from the Medical College of Virginia in 1929.

While a freshman at William and Mary College he met Eugenia Jackson Beasley, whom he later married in June of 1930.

For more than 10 years he was on the staff of the Eastern State Hospital, Williamsburg, where he was known for his conscientious devotion to his duties. He was genuinely loved by his patients, the college and the townfolk alike. Loyalty was the mark of this man. Although content with his life and work at Williamsburg, he resigned his position as principal physician at Eastern State in 1942 as a protest to what he considered to be the improper criticism of his chief, the late Dr. George Brown, then superintendent of the Hospital. For a few months he served as psychiatrist in the induction station in Richmond, while waiting for his commission in the Navy.

He entered the Navy in January of 1943, being stationed during the war years at Great Lakes Naval Training Station, and later at Camp Perry. When his active duty was completed he kept current in Naval affairs by serving as medical officer in the evenings at the local

training station. Whenever possible he went to sea on training cruises. For outstanding performance he was promoted to the rank of Commander in July of 1954. Dr. Terrell was justly proud of his service record, and by his own request was buried in Arlington National Cemetary in the uniform he loved so well.

For the past 10 years he had been on the staff at McGuire Veterans Administration Hospital.

His assignment consisted of the management of the acute, intensive treatment program required for mentally ill veterans. He was Assistant Chief of the Neuropsychiatric Service at the time of his death, and was an outstanding member of the Staff. His opinions and judgment as a psychiatrist could always be relied upon.

. . . .

Dr. Terrell loved fishing and boats and the good food of Virginia's tidewaters. He loved the traditions of the Navy and the sea. He loved his work and his family, and he loved a good story.

Those fortunate to work intimately with Dr. Terrell will recall his quiet sense of humor. He had the wonderful ability to find amusement in the strange things that patients said or did and to enjoy the commonplace things that happen to ordinary people and to their children.

His keen perception of humor was equally effective when he himself was the butt of the jest. Even when he came to realize the cruel seriousness of his last illness he preferred to joke about his infirmities rather than to weep.

This is often the way that brave men die. Surely this Academy has lost a valued member, the Navy a devoted officer, Psychiatry an outstanding practitioner, and many of us a dear companion and friend.

Be it Resolved, that these sentiments be made a part of the minutes of this Academy, and the secretary be instructed to send a copy to his family with our profound sympathy in their bereavement which is also ours.

James B. Funkhouser, M.D.
Frank A. Wade, M.D.
I. S. Zfass, M.D.

Dr. Creekmur

Dr. Rogers Lee Creekmur, the son of William T. and Margaret Lee Rogers Creekmur, was born in Richmond, Virginia, July 8, 1896.

After attending the Richmond Public Schools and Randolph Macon College, he matriculated at the Medical College of Virginia where he was graduated in 1921 with the degree of Doctor of Medicine. He served his internship at Grace Hospital, after which he established himself in private practice in Richmond. During this time, he became associated with Dr. Robert C. Bryan, which association continued until the death of Dr. Bryan.

On July 1, 1938, he was appointed physician and surgeon of the Fire Bureau here, which he served well and continuously until his death on September 3, 1955. He was so beloved hy this group that an attempt by the Director of Public Safety to replace him in this position in 1945 was successfully opposed by the organized efforts of the firemen, resulting in his almost immediate re-appointment.

Dr. Creekmur was also company physician for Richmond Newspapers, Inc. He was a member of the Richmond Academy of Medicine, the Richmond Urological Society, The Medical Society of Virginia, the American Medical Association, the Southern Medical Association, the Mid-Atlantic Section of the American Urological Association, the Commonwealth Club, and the County Club of Virginia, He was also a thirty-third degree Mason. He was on the visiting staffs of Stuart Circle Hospital, the Retreat for the Sick, the Medical College of Virginia Hospital, and Sheltering Arms Hospital.

Rogers Creekmur was a genial, courteous gentleman, whose unfailing good humor and versatility won him many friends socially and professionally in this community. All who knew him liked him, and his passing was a great loss to a great many.

Be it Resolved, then, that a copy of this resolution be spread upon the minutes of this Academy, and that a copy be sent to the family of Dr. Creekmur.

Manfred Call, III, M.D.
Charles R. Robins, Jr., M.D.
Frank Pole, M.D., *Chairman*

Dr. Leech

Dr. Frank McConnell Leech, a prominent surgeon of Lexington, Virginia, died suddenly with a heart attack at his home on August 9, 1955. He was born at Murat, Rockbridge County, Virginia, December 27, 1894.

Dr. Leech's preliminary education was received in the public schools of the county, followed with a Bachelor of Arts degree in 1916 at Washington and Lee University. He studied medicine at the Medical College of Virginia, graduating in 1920. He was a member of the Omega Upsilon Medical Fraternity. His internship was served at the Sheltering Arms Hospital, Richmond, Virginia. After leaving Richmond he interned for three years at Governour Hospital, New York City, taking his residency in surgery there. Later he studied for six months at the Mayo Clinic.

Dr. Leech located in Lexington in 1923 to practice surgery. During the years that followed he was the leading force in the development of Jackson Memorial Hospital, aiding financially, giving his time, thought and efforts in securing competent personnel for the efficient operation of the hospital which grew rapidly, necessitating two additions which more than doubled the bed capacity.

He was a member of The Medical Society of Virignia, the American Medical Association and a Fellow of the American College of Surgeons.

During his spare time, through interest and intenisve effort, Dr. Leech developed one of the most outstanding herds of Registered Hereford cattle east of the Mississippi.

Surviving him are his wife, Bess Dunlap Leech of Lexington; his mother, a brother, and four sisters.

Dr. Leech was always considerate of his patient's welfare. His passing is a great loss to the profession and to the community.

Therefore Be It Resolved that these resolutions be incorporated in the minutes of the staff of the Stonewall Jackson Hospital, in the minutes of the Rockbridge County Medical Society, a copy to his wife and to the Virginia Medical Monthly.

Thomas F. Kennon, M.D.
Howard L. Mitchell, M.D.

VIRGINIA MEDICAL MONTHLY

INDEX TO VOLUME LXXXII

January 1955—December 1955, inclusive

January	— pages 1- 48	May	— pages 213-256	September	— pages 381-434
February	— pages 49-118	June	— pages 257-298	October	— pages 435-484
March	— pages 119-168	July	— pages 299-338	November	— pages 485-530
April	— pages 169-212	August	— pages 339-380	December	— pages 531-578

AUTHOR INDEX

Albertson, Horace A., 306, 401
Anderson, A. Scott, 12
Arnold, Gayle G., 546
Bailey, Joseph, 507
Beachley, R. G., 317
Blake, John A., 31
Blanton, Wyndham B., 72, 96
Bloom, Nathan, 339
Bobbitt, O. B., 351
Bosher, Lewis H., Jr., 294, 507
Bower, Richard E., 518
Bray, W. E., 351
Burke, James O., 339
Butcher, Robert G., 7
Catron, Stuart H., Jr., 186
Craig, Winchell McK., 182
Crockett, Charles L., Jr., 217
Daugherty, Guy W., 261
Davidson, Harley, 339
Davidson, Henry A., 108, 196, 281, 370
Dean, James S., 552
Decker, Wayne H., 444
Dees, Susan, 90, 389
D'Esopo, D. A., 213
Deyerle, Wm. Minor, 407
Dodson, Austin I., 264, 385
Dodson, Austin I., Jr., 264
Drash, E. C., 41
Duncan, George A., 349
Eley, R. Cannon, 267
Emmett, J. M., 431
Fisher, Ernest C., Jr., 1
Fitz-Hugh, G. S., 76, 395
Fleming, Thomas C., 276
Flippin, Harrison F., 435
Friedman, Asher A., 280, 516
Fuller, W. Allen, 534
Galbraith, L. M., 540
Garnett, Richard W., Jr., 61
Germany, Kathryn R., 200
Giesen, Andrew F., 342
Green, Thomas W., 130
Groseclose, Eugene S., 496
Guerrant, John L., 51, 79, 82
Hampton, Ambrose G., Jr., 217
Haynes, B. W., Jr., 534
Hedges, H. S., 544
Hill, J. Edward, 385
Hipp, Edward R., 125
Hoback, William W., 130
Hobart, S. G., Jr., 395
Hollins, George G., Jr., 349
Holmes, Howard S., 366
Januszeski, Francis J., 146
Jordan, William R., 136
Kawchak, James, 441
Kay, William R., 320
Keyes, Paul S., 150
King, M. K., 540
Lambrides, John G., 451
Lantz, Edna M., 104
Leavell, Byrd S., 217
Leavitt, Daniel, 401
Lingamfelter, Carl S., 480
Lowenberg, Eugene L., 354
Mangum, Charles Preston, 361
Martin, Walter B., 257
Mayers, S. P., Jr., 317
McCarty, Dennis P., 237
McClintock, John C., 299
McCully, Robert S., 283
Meredith, John M., 490
Michael, Maurice A., 190
Minor, George R., 94, 125
Mishalany, Henry G., 534
Mitchell, Howard L., 138
Moon, Cary N., Jr., 169
Mullendore, James M., 141
Murphy, W. F., 540
Palmer, Edwin J., 15
Pratt, Daniel W., 404
Preston, H. Grant, 229
Rawles, Benjamin W., Jr., 332
Ray, Edward S., 511
Richards, L. G., Jr., 309
Sawyer, William A., 302
Schneider, Charles F., 342
Schwartz, Raymond, 252
Shands, A. R., Jr., 381
Shepard, William P., 485
Smith, Margaret H., 239
Smith, R. O., 127
Stevens, John Edgar, 119
Studdiford, W. E., 444
Swineford, Oscar, Jr., 49, 54, 64, 85, 176
Thiemeyer, John S., Jr., 225, 349
Thoma, G. W., 243
Thorpe, James, 326
Toone, Elam C., Jr., 441
Torres del Torro, Jose M., 306
Truslow, John B., 375
Tucker, H. St. George, Jr., 113
Vinson, Porter P., 346
Watkins, D. Edward, 233
Weaver, Edgar N., 363
Williams, Carrington, 531
Williams, Ennion S., 205
Wilson, Frank E., 158
Wood, H .W., 540
Wood, John Thornton, 130
Woodward, Fletcher D., 169
Wornom, Paul H., 176
York, James R., 514
Yount, Ernest H., 173

ACTH and cortisone therapy, General consideration of, 186; Treatment of snake venom poisoning with — — —, 130

Alcoholism and delirium tremens, Pyridoxine hydrochloride in the treatment of acute, 15

Allergic reaction to pantothenic acid, 280

American Medical Education Foundation, 193

Anthrax in man, 372

Antibiotics in the treatment of infections of the urinary tract, The use and misuse of, 385

Antimicrobial therapy, Future prospects of, 435

Arlington, A survey of dog bites in, 317

Arteriomesenteric duodenal obstruction, 342

Artery bank, A freeze-dried, 125

Arthritic, non-, disturbances of the hand and wrist, Painful, 441

Arthritis of the hips, Further experiences with the femoral head prosthesis in fractures and, 349

Asthma Conference, Introduction to 49; Pathology and abnormal physiology in —, 51; Immunology of —, 54; The mechanism of pyschogenic —, 61; Classification and etiologic diagnosis of —, 64; The symptomatic treatment of —, 72; Treatment of sinusitis in patients with —, 76; The treatment of atopic —, 79; The psychotherapeutic approach to —, 82; Treatment of infectious —, 85; Management of — in children, 90; Aspirations of secretions in —, 94; Closing panel on —, 96; Old and new therapy for —, 389

Automobile accidents and deaths, The physicians responsibility in the prevention of, 169

Blood transfusions, Dangers of, 217

Book Reviews

Hare—Pomp and Pestilence, 419

Jawetz—Review of Medical Microbiology, 292

McAuley—Concept of Schizophrenia, 330

Netter—The Reproductive System, 418

Regional Allergy of the United States, Canada, Mexico and Cuba, 418

Riese—La Pensee Morale en Medecine, 241

Rodale—This Pace is NOT Killing us, 419

Russell—The Scourge of the Swastika, 292

Standard-Nathan—Should the Patient Know the Truth, 567

Breast, Tumor of the: cystosarcoma phyllodes, 233

Caduceus in this atomic age, The cross and the, 451

Cancer of the lung, Tobacco and, 331

Carcinoma of the upper respiratory tract, Recent trends in the treatment of, 395

Children to do their job, Helping, 458; A few remarks on services for crippled —, 381; — at Eastern State Hospital, 239

Chlorpromazine in the management of nausea and vomiting, 306; Jaundice associated with —, 339; The value of — hydrochloride and reserpine in relation to other methods used in treating mental illness, 415

Chondromalacia of the patella, 225

Chondosarcoma, 320

Cold, Speculations on the common, 127

Colleges

Medical College of Virginia, 334

University of Virginia, 334

Competency, 454

Congenital skin defects, 546

Coronary occlusion as a compensable disease, Acute, 146

Cortisone and ACTH therapy, General consideration of, 186; Treatment of snake venom poisoning with — — —, 130

Coryza, tonsillectomy and adenoidectomy, Maxillary sinusitis in children: its relation to, 229

County society, its duties and responsibilities, The, 257

Crippled children, A few remarks on services for, 381

Cross and caduceus in the atomic age, The, 451

Cystosarcoma phyllodes, 233

Deaths

Abbitt, John Willis, 530

Bates, Robley D., Sr., 168

Bennett, Coleman Douglas, 484

Bigger, Isaac Alexander, 166, 210

Bowman, Wilbur Morrison, 298, 338

Brown, George Woodford, 47

Carr, Charles Clay, 530

Carr, George Hopkins, 47

Christian, David A., III, 210

Corbett, Henry Clay, 572

Creekmur, Roger Lee, 484. 572

DeBoe, Michael Price, 380

Dew, Roderick, 380

Dudley, W. Brown, 46

Fay, Frederick Oliver, 118, 168

Fletcher, Oscar Richard, 484

Freydeck, Max, 210

Gates, Arthur Marion, 380

Greear, Clabe Baker, 337

Harris, Percy, 167

Horsley, Frederick Melville, 338

Horsley, John Thruston, 338

Howle, Paul Williamson, 48

Hughes, Thomas Jefferson, 337

Jones, Thomas Duckett, 45

Kolmer, George August Leonard, 167

Lacy, Joseph Barkley, 484

Leech, Frank McConnell, 434, 572

Manson, Richard Hawes, 380

Marable, James Edward, 118

Mauck, Henry Page, 167, 211

McAlpine, Louis A., 47

Miller, E. C. L., 48

Moncure, Philip St. Leger, 530, 572

Morton, William Richard, 168, 212

Nixon, Samuel Henry, 256

Patton, Henry Webster, 209

Perry, Seth Bridgman, 380

Peterson, Carl M., 530

Powell, William Leven, 45

Pretlow, Robert Henley, 256

Schiff, Walter Stefan, 209

Senter, Eugene William, 47

Shelburne, James Thomas, 118, 212

Simmerman, John Walter, 338

Snead, Nash P., 380

Tabb, Henry Adams, 118, 256
Terrell, Earley Thomas, Jr., 434
Terrell, Thomas Kennerly, 337, 572
Trice, Ernest T., 484, 572
West, William Johnson, 45
White, Rooker John, 167
Whited, Albert Patton, 168
Williams, John Powell, 45
Wright, George A., 46
Wright, John Alexander, Sr., 484

Delirium tremens, Pyridoxine hydrochloride in the treatment of acute alcoholism and, 15
Dermatology, Medical nomenclature and, 516
Diabetes, The diagnosis of, 136
Doctor as a witness and his obligation to the court, The, 12
Dog bites in Arlington, A survey of, 317
Duodenal obstruction, Arteriomesenteric, 342

Editorials
ACTH and cortisone, 113
Arteriosclerosis, The surgery of segmental arterial occlusion due to, 294
Bauer resolution, The, 332
Coagulation defects in obstetrical hemorrhage, 252
Doctor draft, The, 431
Health insurance, A joint endeavor, 205
Legislation, Current medical, 158
Meeting, The Annual, 569
Obstetrical hemorrhage, Coagulation defects in, 252
Pemphigus, 480
President, Our new, 524
Tuberculosis, The importance of professional education in the eradication of, 375
Tuberculosis in Virginia, Control of, 41
Tuberculosis situation, Measuring the, 205

Enteritis following tetracycline therapy, A fatal case of pseudomembranous, 401
Endometriosis, An unusual differential problem in, 548
Esophageal hernia, The diagnosis, etiology and treatment of hiatal, 346
Exophthalmos, Intra-orbital tumors and progressive, 182
Eye damage by tobacco, 544
Femoral neck following fracture, Shortening of the, 404
Fibroplasia, Retrolental, 520
Fracture, Shortening of the femoral neck following, 404
Fractures and arthritis of the hips, Further experiences with the femoral head prosthesis in, 349
Glomerulonephritis, Management of chronic, 261
Goiter, The significance of nodular, 299; Incidence of —, 111
Gynecology, Preventive, 213
Hand and wrist, Painful non-arthritic disturbances of the, 441
Hematoma, The diagnosis and treatment of chronic subdural, 490
Hematuria, The significance of, 264
Hematologic disorders seen in practice, Treatment of some common, 119
Hernia, A discussion of ventral, 237; The diagnosis, etiology and treatment of hiatal esophageal, 346
Hips, Further experiences with the femoral head prosthesis in fractures and arthritis of the, 349
Histoplasmosis, An interesting case of, 514
Hyperthyroidism, The medical management of, 173
Ileum, Intra-uterine rupture of Mechel's Diverticulum with atresia of the, 540
Impulse, Irresistable, 370
Industrial cases, Medical reports on, 407
Influenza, 34
Intestinal obstruction due to metastatic melanotic sarcoma nine years after removal of pituitary tumor, 190
Intra-orbital tumors and progressive exophthalmos, 182
Jaundice associated with chlorpromazine, 339
Laryngeal cartilages by high voltage, Destruction of, 138
Laryngotracheobronchitis, A new approach to, 361
Legislation, Important, 568
Leptospirosis or Weil's disease, 325
Leukemoid reactions: four brief case reports, 351
Lumbar puncture, The, 363
Malingering and neurosis, 281
Malpractice, 1; Actions for —, 7; — and the emotionally disturbed patients, 196
Marriage, divorce and mental disorder, 108
Measles, 153
Meat inspection service, The State Health Department's, 106, Public Health and — —, 550
Meckel's diverticulum with atresia of the ilum, Intra-uterine rupture of, 540
Medical reports on industrial cases, 407
Medical Society of Virginia: Minutes of annual meeting, 18, 555, 569; Delegates to the American Medical Association, 144; Council, 288; Program, Annual meeting, 421; Reports for annual meeting, 460; Presidents, 478; Our new president, 524
Medicolegal interpretations of deaths in elderly people complicated by trauma, 243
Mental hospitals in Virginia, Operating farms at the, 150; Christmas at the — — — —, 104; After-care clinics at the — — — —, 200; Children at Eastern State — hospital, 239; Modification in administration of certain projective techniques, 283; The training program at the Lynchburg Training School and Hospital, 366; Marriage, divorce and — disorder, 108, Thorazine as a sole therapeutic agent in certain — disorders, 552
Nausea and vomiting, Chlorpromazine in the management of, 306
Obstetrical practice in Virginia, A quarter century of, 496
Pantothenic acid, Allergic reaction to, 280
Parkinsonism, Drug therapy of, 276
Patella, Chondromalacia of the, 225
Patient ductus arteriosus, The surgery of, 507
Peripheral vascular diseases, The treatment of: diseases of the veins, 354
Pertussis, 456
Phenylbutazone (Butazolidin) in the treat-

ment of various rheumatic disorders, 176

Placenta, Premature separation of the normally implanted, 444

Poliomyelitis vaccine, 413; — in Virginia, 1954, 286; The medical care of acute —, 267; — — plans, 1955, 195

President's address, 531

Psychological program, A four-part, 31

Psychotherapy of parents in a child guidance clinic, Summarization of group, 326

Public health, Trends in, 485, — — and meat inspection, 550

Public relations, 157

Pyridoxine hydrochloride in the treatment of acute alcoholism and delirium tremens, 15

Renal insufficiency, The management of acute, 534

Reserpine and chlorpromazine in treating mental illness, The value of, 415

Respiratory tract, Recent trends in the treatment of carcinoma of the upper, 395

Rheumatic disorders, Phenylbutazone (Butazolidin) in the treatment of, 176

Salmonella infections, 242

Sarcoma nine years after removal of primary tumor, Intestinal obstruction due to metastatic melanotic, 190

Sinusitis in children, Maxillary: its relation to coryza, tonsillectomy and adenoidectomy, 229; Treatment of — — patients with asthma, 76

Skin defects, Congenital, 546

Snake venom poisoning, Treatment of with ACTH and cortisone, 130

Societies

Accomac County Medical Society, 162

Alexandria Medical Society, 296

Alleghany-Bath Medical Society, 333

American Academy of General Practice, 254

American College of Physicians, Virginia Section, 116

Arlington County Medical Society, 115

Bedford County Medical Society, 162

Fourth District Medical Society, 115

Fredericksburg Medical Society, 115

Halifax County Medical Society, 162

Loudoun County Medical Society, 570

Medical College of Virginia Alumni, 336

Medical Society of Northern Virginia, 115

Montgomery County Medical Society, 333

Neuropsychiatric Society of Virginia, 526

Princess Anne County Medical Society, 296

Public Relations Conference, 29

Richmond Academy of General Practice, 165

Richmond Academy of Medicine, 42

Richmond Academy of Medicine, Section on History of Medicine, 163

Roanoke Academy of Medicine, 333

Rockingham County Medical Society, 115

South Atlantic Assn. of Obstetricians and Gynecologists, 207

Southwest Virginia Medical Society, 526

Tri-State Medical Association, 207

Virginia Academy of General Practice, 336

Virginia Association of Mental Health, 207

Virginia Diabetes Association, 116

Virginia Neuropsychiatric Society, 116

Virginia Obstetrical and Gynecological Society, 116

Virginia Orthopedic Society, 116

Virginia Pediatric Society, 116, 207

Virginia Peninsula Academy of Medicine, 115

Virginia Radiological Society, 116

Virginia Society of Anesthesiologists, 116

Virginia Society of Ophthalmology and Otolaryngology, 333

Virginia Society of Pathology, 43, 116

Williamsburg-James City Medical Society, 115

Surgery, Immediate and early physiological reaction to, 309

Tetracycline therapy, A fatal case of pseudomembranous enteritis following, 401

Tobacco and cancer of the lung, 331, Eye damage by —, 544

Tonsilectomy and adenoidectomy, Maxillary sinusitis in children: its relation to coryza, 229

Tuberculosis, Drug therapy of, 511; Pulmonary —, 241; Modern therapy of pulmonary —, 36, 101, 147, 197

Union welfare funds and the doctors, 302

Urinary tract, The use and misuse of antibiotics in the treatment of infections of the, 385

Veins, diseases of the: the treatment of peripheral vascular diseases, 354

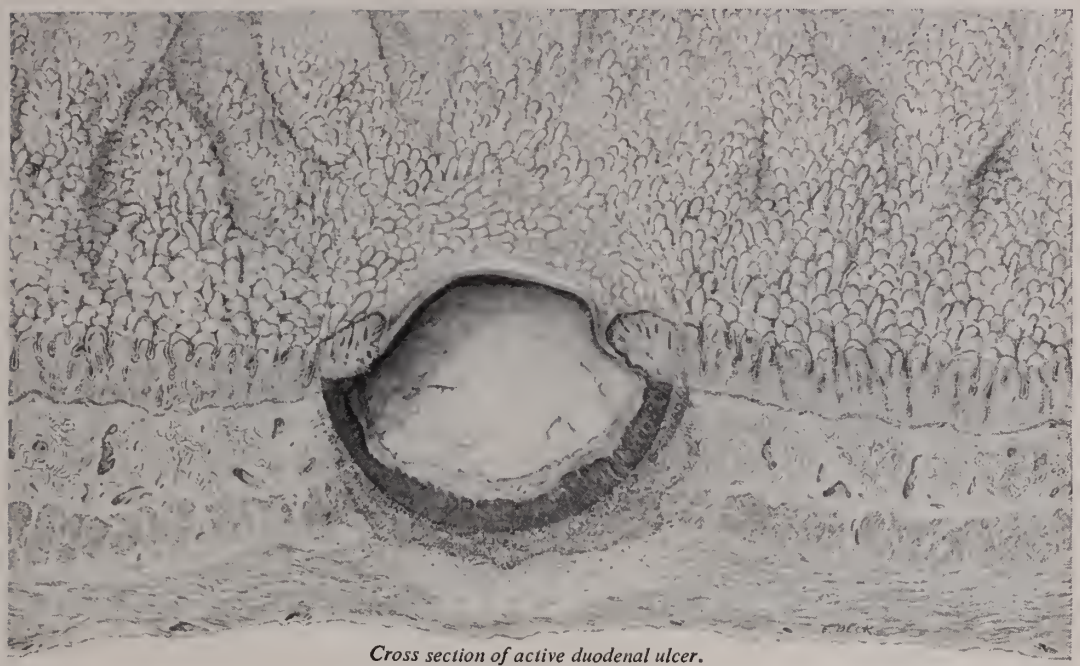
Voice disorders, Pre-operative consultations in organic, 141

Weil's disease or leptospirosis, 325

Welfare funds and the doctors, Union, 302

Witness and his obligation to the court, The doctor as a, 12

Wrist, Painful non-arthritic disturbances of the hand and, 441



Cross section of active duodenal ulcer.

Dramatic Remission of Ulcer Pain

Pain of ulcer is associated with hypermotility; the pain is relieved when abnormal motility is controlled by Pro-Banthīne.

"In studying[1] the mechanism of ulcer pain, it is obvious that there are at least two factors which must be considered: namely, hydrochloric acid and motility.

"... our studies indicate that ulcer pain in the uncomplicated case is invariably associated with abnormal motility. ...

"Prompt relief of ulcer pain by ganglionic blocking agents ... coincided exactly with cessation of abnormal motility and relaxation of the stomach."

Pro-Banthine Bromide (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is a new, improved, well tolerated anticholinergic agent which consistently reduces hypermotility of the stomach and intestinal tract. In peptic ulcer therapy[2] Pro-Banthine has brought about dramatic remissions, based on roentgenologic evidence. Concurrently there is a reduction of pain, or in many instances, the pain and discomfort disappear early in the program of therapy.

One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

"This ulcer crater was unusually large, yet on 30 mg. doses of Pro-Banthine [q.i.d.] his symptoms were relieved in 48 hours and a most dramatic diminution in the size of the crater was evident within 12 days."

Pro-Banthine is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

---

1. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

2. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

SEARLE

STUART CIRCLE HOSPITAL

413-21 Stuart Circle
RICHMOND, VIRGINIA

Medicine:
Manfred Call, III, M.D.
M. Morris Pinckney, M.D.
Alexander G. Brown, III, M.D.
John D. Call, M.D.
Wyndham B. Blanton, Jr., M.D.
Frank M. Blanton, M.D.
John W. Powell, M.D.

Obstetrics and Gynecology:
Wm. Durwood Suggs. M.D.
Spotswood Robins, M.D.
Edwin B. Parkinson, M.D.
David C. Forrest, M.D.

Orthopedics:
Beverley B. Clary. M.D.
James B. Dalton, Jr., M.D.

Pediatrics:
Charles P. Mangum, M.D.
Edward G. Davis, Jr., M.D.

Ophthalmology, Otolaryngology:
W. L. Mason, M.D.

Anesthesiology
William B. Moncure, M.D.
Heth Owen, Jr., M.D.

Surgery:
A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr., M.D.

Urological Surgery:
Frank Pole, M.D.

Oral Surgery:
Guy R. Harrison, D.D.S.

Plastic Surgery:
Hunter S. Jackson, M.D.

Roentgenology and Radiology:
Fred M. Hodges, M.D.
L. O. Snead, M.D.
Hunter B. Frischkorn, Jr., M.D.
William C. Barr, M.D.

Physiotherapy:
Miss Etheleen Dalton

Director:
Charles C. Hough

TUCKER HOSPITAL Inc.

212 West Franklin Street,

Richmond, Virginia

A private hospital accepting for diagnosis and treatment organic neurological conditions, selected psychiatric and alcoholic cases, metabolic disturbances of an endocrine nature, individuals who are having difficulty with their personality adjustments, and children with behavior problems. Patients with general medical disorders admitted for treatment under our staff of visiting physicians.

Under the Professional Charge of

Dr. Howard R. Masters, Dr. James Asa Shield
and Associates

SAINT ALBANS

A PRIVATE PSYCHIATRIC HOSPITAL

RADFORD, VIRGINIA



STAFF

James P. King, M. D., Director

James K. Morrow, M. D. Thomas E. Painter, M. D. Daniel D. Chiles, M. D.

James L. Chitwood, M. D., Medical Consultant

Affiliated Clinic Offering Psychiatric and Psychological Evaluation and Therapy:

BLUEFIELD MENTAL HEALTH CENTER

1400 Bland Street **Bluefield, W. Va.**

David M. Wayne, M. D., Director

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

Medical College of Virginia

HOSPITAL DIVISION

RICHMOND, VIRGINIA

A health center using the latest methods of diagnosis and treatment of disease.

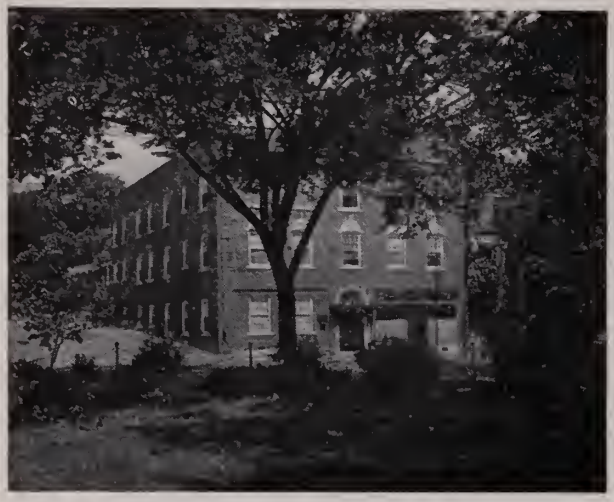
MEDICAL COLLEGE OF VIRGINIA HOSPITAL
OUT-PATIENT DEPARTMENT
SAINT PHILIP HOSPITAL
DOOLEY HOSPITAL

The patient's welfare is our primary interest.

C. P. CARDWELL, JR., *Director*

Gill Memorial Eye, Ear and Throat Hospital, Inc.

Roanoke, Virginia



STAFF

ELBYRNE G. GILL, M. D.
HOUSTON L. BELL, M. D.
THOMAS QUILTY, M. D.
DORIS L. JANES, B. S., O. D.
(Orthoptics and Contact Glasses)
S. H. HOLLAND, M. D.
ROBERT B. JONES, JR., M. D.

A Modern, Fireproof Hospital, Specially Designed and Equipped for the Medical and Surgical Care of Ophthalmology, Otolaryngology, Facio-Maxillary Surgery, Bronchoscopy and Esophagoscopy.

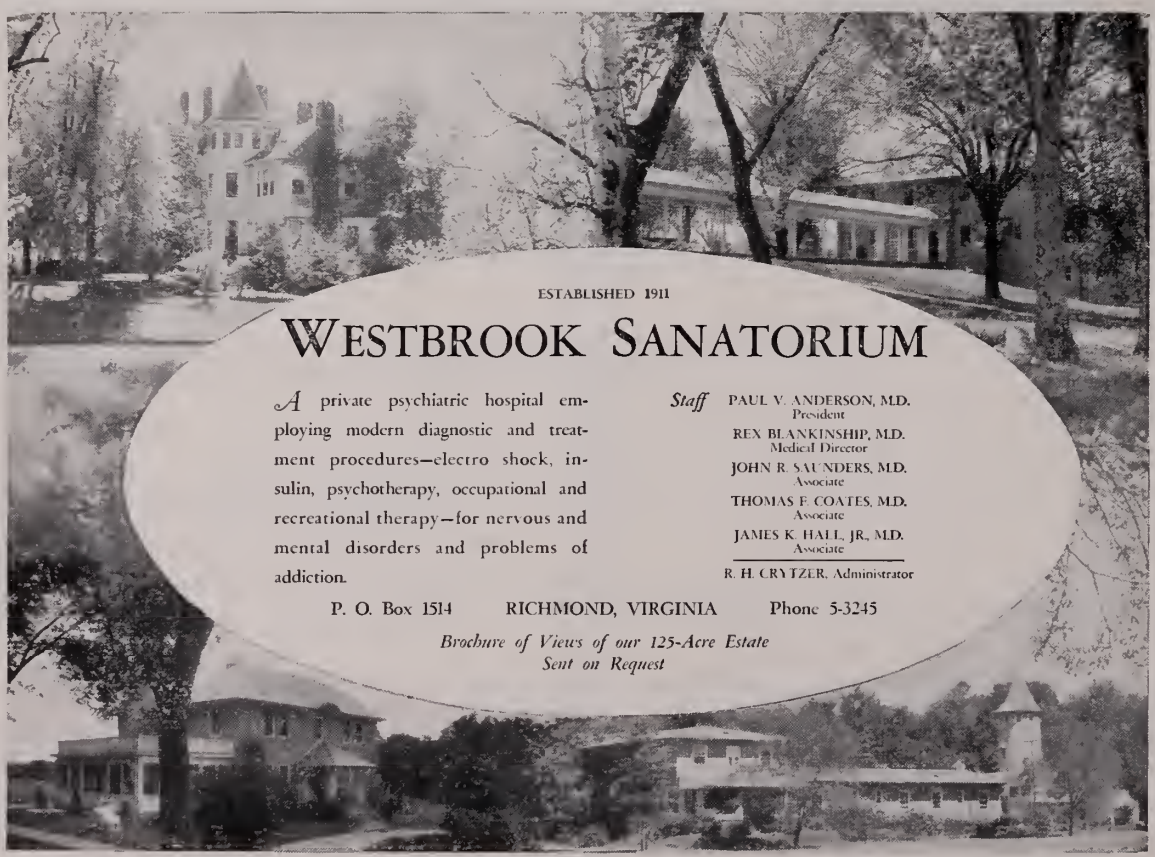
Complete Laboratory and X-Ray Equipment.

Physicians and Graduate Nurses in Constant Attendance.

The Hospital offers a residentship of three years to a graduate of an approved medical school, who has had an internship of at least one year in an approved hospital.

For further information, address

BUSINESS MANAGER, BOX 1789, ROANOKE, VIRGINIA



ESTABLISHED 1911

WESTBROOK SANATORIUM

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

Staff PAUL V. ANDERSON, M.D.
President
REX BLANKINSHIP, M.D.
Medical Director
JOHN R. SAUNDERS, M.D.
Associate
THOMAS F. COATES, M.D.
Associate
JAMES K. HALL, JR., M.D.
Associate

R. H. CRYTZER, Administrator

P. O. Box 1514 RICHMOND, VIRGINIA Phone 5-3245

Brochure of Views of our 125-Acre Estate
Sent on Request

THE
KEELEY
INSTITUTE
447 W. Washington St.
GREENSBORO,
NORTH CAROLINA

Out-Patient Clinic
And Hospital For Rehabilitation Of
The ALCOHOLIC

A. F. Fortune, MD: Medical Director
Ben F. Fortune, MD: Associate Medical Director
R. H. Dovenmuehle, MD: Consultant in Psychiatry

In-patients are accepted in state of acute alcoholism. No waiting period required.

Registered by American Medical Association



Part View of Park Grounds

TERRACE HILL was specifically built for a Nursing Home. Superb 24 hours daily care. Under supervision of a Registered Nurse and Resident Externe. Quiet atmosphere. Trained Dietitian. Accommodates 50 guests Private and semi-private rooms with lavatories Rates $45.00 to $75.00 weekly for room, board and general nursing care. Your inspection invited.

Professional Nursing Care

TERRACE HILL

Nursing Home, Inc.

"Understanding Care"

2112 MONTEIRO AVE., RICHMOND, VA.



Comfortable Lounges

Around the Clock
NURSING CARE

Convalescents
Chronic Cases
Elderly People



Wide, Long Hallways

Each Guest Under Care of Own Doctor.

Professional care supervised by trained nurse. Doctors orders carefully followed. No parking problem. Regularly inspected by City Health Department. For additional information

Write or Call Superintendent

TERRACE HILL NURSING HOME, Dial 3-3993

GRADE A PASTEURIZED PRODUCTS

GRADE A MILK
HOMOGENIZED MILK (Natural Vitamin D added)
GOLDEN GUERNSEY MILK
GOLDEN FLAKE BUTTERMILK
SKIM MILK—COFFEE CREAM
WHIPPING CREAM—COTTAGE CHEESE
DARI-RICH CHOCOLATE MILK
GARST BROS. DAIRY BUTTER

"ROANOKE'S MOST MODERN DAIRY"

GARST BROS. DAIRY INC.
DIAL 5501

LABORATORY CONTROL
FOR YOUR PROTECTION
DIAL 5502

Adequate Hospitalization for Treatment of Alcoholics

Doctors find the modern facilities and specialized care available at White Cross Hospital meet a vital need.

Affords Sympathetic Atmosphere, Encouraging Personal Attention, Specially Trained Staff

It is generally believed that alcoholism is self-imposed. Often in general hospitals the alcoholic patient is not considered to be "legitimately" sick, which results in the wrong psychological and emotional atmosphere that aggravates the condition. This is why more and more doctors with alcoholic cases where hospitalization is essential are utilizing the facilities at White Cross Hospital, devoted to the treatment of alcoholics exclusively. Here a sympathetic, comfortable and pleasant atmosphere—so essential to rehabilitation—is assured. The White Cross staff, trained in the special problems of the inebriate, is adequate to assure prompt attention at all hours. The White Cross Hospital is under the direction of a competent licensed physician, with five consulting physicians subject to call. Registered nurses and technicians are in charge 24 hours daily.

Safe, Effective White Cross Treatment

A private hospital offering scientific, institutional, medical, psychological, reflex, reduction and other methods for the rehabilitation of consent patients suffering from alcoholism. With the consent of the doctor and patient, the regular White Cross procedure is followed. At your request, your patient remains entirely under your supervision. You may come and go in White Cross Hospital at will, and will find the staff completely cooperative. Your recommendations will be followed to the letter.

All equipment modern with facilities to take care of 50 patients both male and female.



Salem, Va. Hospital

Approved and licensed by the Virginia State Hospital Board, Member American Hospital Association. Located atop beautiful Mt. Regis, in the quiet serene mountains of Virginia—conducive to rest, comfort and rehabilitation.

For information phone or write for booklet
Rates Reasonable

WHITE CROSS HOSPITAL

Five miles west of Roanoke on route No. 11
Salem, Virginia—Phone Salem 4761

Copyright 1955 H.N. Alford, Atlanta, Ga.

McGUIRE CLINIC
ST. LUKE'S HOSPITAL

RICHMOND, VIRGINIA



General Medicine
HUNTER H. McGUIRE, M.D.
MARGARET NOLTING, M.D.
JOHN P. LYNCH, M.D.
WM. H. HARRIS, JR., M.D.
JOHN B. CATLETT, M.D.
ROBERT W. BEDINGER, M.D.

Orthopedic Surgery
JAMES T. TUCKER, M.D.
BEVERLEY B. CLARY, M.D.
EARNEST B. CARPENTER, M.D.
JAMES B. DALTON, JR., M.D.

Ophthalmology, Otolaryngology
FRANCIS H. LEE, M.D.

General Surgery
WEBSTER P. BARNES, M.D.
JOHN H. REED, JR., M.D.
JOHN ROBERT MASSIE, JR., M.D.
JOSEPH W. COXE III, M.D.

Dental Surgery
JOHN BELL WILLIAMS, D.D.S.

Urology
AUSTIN I. DODSON, M.D.
CHAS. M. NELSON, M.D.
AUSTIN I. DODSON, JR., M.D.

Pediatrics
HUBERT T. DOUGAN, M.D.

Obstetrics
W. HUGHES EVANS, M.D.
W. H. COX, M.D.
JAMES M. WHITFIELD, M.D.

Bronchoscopy
GEORGE AUSTIN WELCHONS, M.D.

Roentgenology
JESSE N. CLORE, JR., M.D.
STUART J. EISENBERG, M.D.

Pathology
J. H. SCHERER, M.D.

Treasurer: RICHARD J. JONES, BS., C.P.A.

RIVERSIDE HOSPITAL, Newport News, Va.



A General Hospital (265 beds) with Departments in Medicine, Surgery, Obstetrics, Pathology, Radiology, Pediatrics and Nursing. The Hospital is accredited by the Council on Medical Education of the American Medical Association for training first year interns, residencies in the surgical specialties for one and two years, general practices two years full approval, internal medicine, and obstetrics and gynecology, and the School of Nursing is accredited by the Virginia State Board of Nurse Examiners.

DAVID E. WATSON,
Administrator

MISS ROSE M. DeWEVER, R.N.,
Director, School of Nursing

RICHMOND EYE HOSPITAL
RICHMOND EAR, NOSE AND THROAT HOSPITAL
(COMBINED)
RICHMOND, VIRGINIA



A new non-profit Community Hospital specially constructed for the treatment of Eye, Ear, Nose and Throat Diseases, including Laryngeal Surgery, Bronchoscopy and Plastic Surgery of the Nose.

Professional care offered a limited number of charity patients.

ADDRESS: JULIA WAGNER WATERS, R.N., *Administrator* **408 North 12th Street**

RIVERSIDE CONVALESCENT HOME

Sophia & Fauquier Sts. **Fredericksburg, Virginia**



For corvalescent, aged, chronically ill, and retired persons. Provides healthful rest, excellent nursing care in cheerful, comfortable surroundings. Air-conditioned, fire-safe building. Accommodations for eighty. Medical Supervision. Inspection Invited. Write, or telephone Essex 3-3434.

Rates:

$35.00 to $75.00 per week

Appalachian Hall • Asheville, North Carolina

ESTABLISHED 1916



An Institution for the diagnosis and treatment of Psychiatric and Neurological illnesses, rest, convalescence, drug and alcohol habituation.

Insulin Coma, Electroshock and Psychotherapy are employed. The Institution is equipped with complete laboratory facilities including electroencephalography and X-ray.

Appalachian Hall is located in Asheville, North Carolina, a resort town, which justly claims an all around climate for health and comfort. There are ample facilities for classification of patients, rooms single or en suite.

WM. RAY GRIFFIN, JR., M.D. — MARK A. GRIFFIN, SR., M.D.

ROBERT A. GRIFFIN, JR., M.D. — MARK A. GRIFFIN, JR., M.D.

For rates and further information write APPALACHIAN HALL, ASHEVILLE, N. C.

Third Decade of Nursing

MODERN IN EQUIPMENT

MRS. PLYLER'S NURSING HOME

OLD IN TRADITION

KATE E. PLYLER (1876-1947)

MARY INGRAM CLARK

CONVALESCENT — CHRONIC — AGED

- Equipped for oxygen and transfusions
- 30 special & general nurses
- 24-hour nursing care
- Centrally located
- 50-bed capacity
- Dietician
- Rates from $42.00 to $70.00 per week for room, board and general nursing care.





For further information write or call MRS. GENE CLARK REGIRER, Supt.

1613-15-17 Grove Avenue—Richmond, Virginia—Telephone 84-3221

ST. ELIZABETH'S HOSPITAL

RICHMOND 20, VIRGINIA

STAFF

Guy W. Horsley, M.D.	General Surgery and Gynecology
D. Coleman Booker, M.D.	General Surgery and Gynecology
Austin I. Dodson, M.D.	Urology
Austin I. Dodson, Jr., M.D.	Urology
J. Edward Hill, M.D.	Urology
Douglas G. Chapman, M.D.	Internal Medicine
Eimer S. Robertson, M.D.	Internal Medicine
T. E. Stanley, M.D.	Internal Medicine
Fred M. Hodges, M.D.	Roentgenology
L. O. Snead, M.D.	Roentgenology
Hunter B. Frischkorn, Jr., M.D.	Roentgenology
Helen Lorraine	Medical Illustration

ADMINISTRATION

William Scott — Business Manager

SCHOOL OF NURSING

The School of Nursing is affiliated with The Johns Hopkins Hospital School of Nursing for a three months' course each in Pediatrics and Obstetrics, and with the Tucker's Hospital in Richmond for a 12 weeks course in Psychiatry.

Address: Superintendent of Nurses

Relax the best way ... pause for Coke

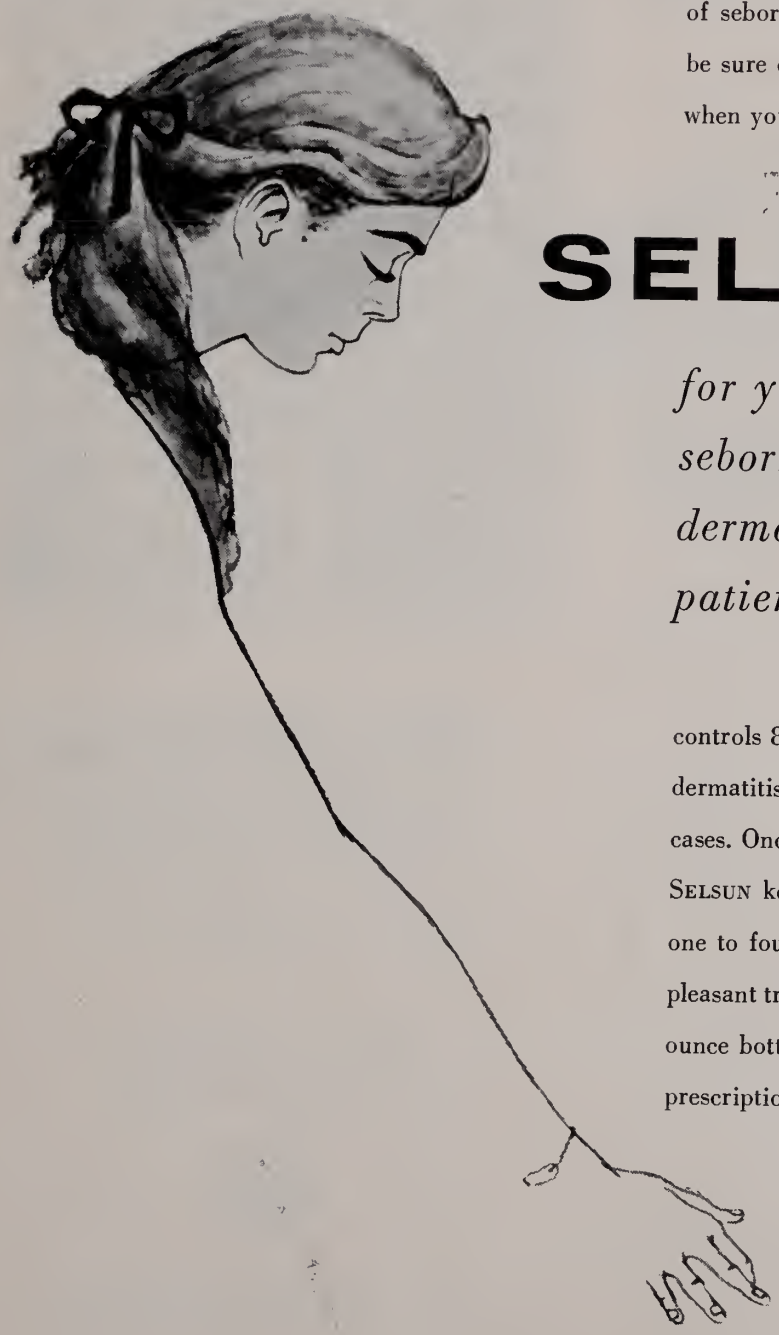


Time out for refreshment

DRINK Coca-Cola REG. U.S. PAT. OFF.



when patients complain of itching, scaling, burning scalps—or when you spot these symptoms of seborrheic dermatitis—you can be sure of quick, lasting control when you prescribe



SELSUN®

for your seborrheic dermatitis patients

controls 81-87% of all seborrheic dermatitis, 92-95% of all dandruff cases. Once scaling is controlled, SELSUN keeps the scalp healthy for one to four weeks with simple, pleasant treatments. In 4-fluid-ounce bottles, available on prescription only. Abbott

506127

® *SELSUN Sulfide Suspension / Selenium Sulfide, Abbott*

He brought snow to New Guinea



DECEMBER 24, 1944. The captured, rebuilt airstrips bake under a blazing sun. No breeze stirs the kunai grass. The dim, weather-stained notice clinging to the mail-room door tells you Jap subs sank the ship carrying Christmas packages.

If you punch two buttons at once on the walkie-talkie, you can tune in on the Jungle Network. The song you hear is a favorite all over the Pacific. It seems to bring you home. "I'm dreaming of a white Christmas . . ."*

The man who wrote that song is an expert at cheering up troops. In 1918, Private Irving Berlin wrote his first all-soldier show, in 1942 his second: "This Is The Army," with which he toured almost every theater of war.

Berlin is also an expert at coming up the hard way. Immigrant to America at 5, on his own at 19, his first song earned just thirty-three cents. But Berlin always kept trying and never lost faith.

His hard-working, confident drive is a trait Americans set great store by. And Americans have a lot of it. Which helps account for the fact that our country's Savings Bonds are one of the world's finest investments.

For the drive of 165 million Americans stands behind these Bonds.

That's why it's such a sound idea for every American—for you—to invest regularly in U.S. Series E Savings Bonds, and hold on to them.

**Copyright 1942, Irving Berlin.*

5 1-2 x 8 in. 100 Screen



It's actually easy to save money—when you buy Series E Savings Bonds through the automatic Payroll Savings Plan where you work! You just sign an application at your pay office; after that your saving is done *for* you. The Bonds you receive will pay you interest at the rate of 3% per year, compounded semiannually, when held to maturity. And *after* maturity they go on earning 10 years *more*. Join the Plan today. Or invest in Bonds regularly where you bank.

Safe as America—
U.S. Savings Bonds

PUBLIC SERVICE ADVERTISING COUNCIL

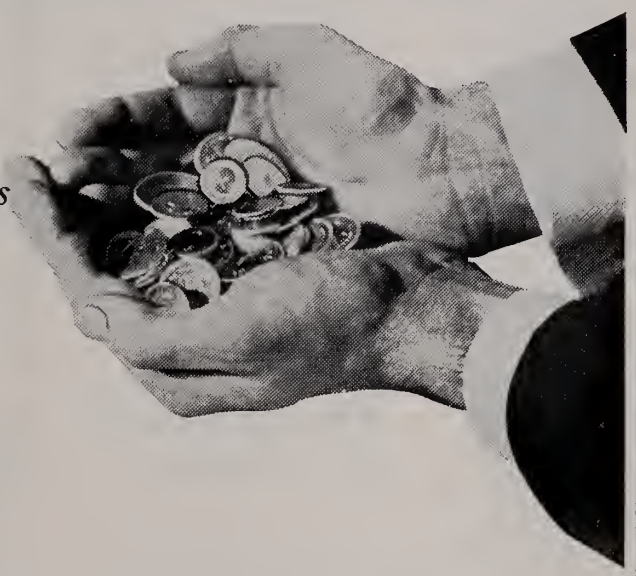
The U.S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.

One of a Series of Newspaper Ads Directed to Your Patients and Our Customers....

PEOPLES DRUG STORES INC

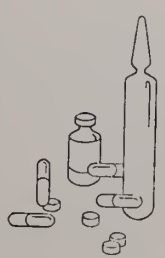
THANKS TO MODERN MEDICINE

it needn't cost a fortune . . . for you to treasure it



Sometimes you may have a prescription filled, and pay—say, 60c for it. Never underestimate a medicine's power because you paid so little. Hundreds of drugs, though priced low, are extremely effective for specific illnesses.

Always remember—the true value of a medicine lies not in how little or even how much you pay—but in how well it does the specific job your doctor intends. Next time your doctor hands you a prescription, hand it to a Peoples pharmacist, for swift, accurate, economical service. And, of course, your prescription is priced with uniform economy at Peoples Service Drug Store.



PEOPLES *Certified* PRESCRIPTIONS

AT ALL PEOPLES SERVICE DRUG STORES

...just what the doctor ordered

© 1955 PEOPLES DRUG STORES, INC.



Whenever the diet is faulty, the appetite poor, or the loss of food is excessive

through vomiting or diarrhea—

Valentine's
MEAT EXTRACT

stimulates the appetite,
increases the flow of digestive juices,
provides: supplementary amounts of vitamins, minerals and soluble proteins,
extra-dietary vitamin B_{12},
protective quantities of potassium, in a palatable and readily assimilated form.

Supplied in bottles of 2 or 6 fluidounces.

Dosage is 1 teaspoonful two or three times daily; two or three times this amount for potassium therapy.

VALENTINE Company, Inc.
RICHMOND 9, VIRGINIA

The American Way

is peace, prosperity, and goodwill toward our fellow man—to invest our time in educating and learning; and our money in good citizens and fine institutions.



One of the finest institutions of your State is Richmond Hotels Incorporated, one that maintains the highest modern hotel standards . . . one that combines the hospitality and charm of the old and the convenience and comfort of the new.

John Marshall William Byrd
King Carter Richmond

Richmond Hotels Incorporated

Foot-so-Port Shoe Construction and its Relation to Weight Distribution



- Insale extension and wedge at inner carner af heel where suppart is mast needed.
- Special Supreme rubber heels are langer than mast anatamic heels and maintain the appearance af narmal shaes.
- The patented arch suppart canstruction is guaranteed nat to break dawn.
- Innersales are guaranteed nat ta crack, curl, ar callapse. Insulated by a special layer af Texan which also cushians firmly and unifarmly.
- Faot-sa-Part lasts were designed and the shoe constructian engineered with arthapedic advice.
- NOW AVAILABLE! Men's conductive shoes. N.B.F.U. specifications. For surgeons and operating room personnel.
- By a special pracess, using plostic positive casts of feet, we make mare custom shaes far polio, club feet and all types af abnormal feet thon ony ather manufacturer.

Write for detoils or contact your locol **FOOT-SO-PORT** *Shoe Agency. Refer to your Classified Directory*

Foot-so-Port Shoe Company, Oconomowoc, Wis.

for equanimity [1,2]...



new anti-anxiety factor with muscle-relaxing properties relieves tension

Wyeth
Philadelphia, Pa.

Usual dosage: 1 tablet, t.i.d.

Supplied: Tablets, 400 mg., bottles of 48.

1. Selling, L.S.: J.A.M.A. **157**:1594 (April 30) 1955.
2. Borrus, J.C.: J.A.M.A. **157**:1596 (April 30) 1955.

*Trademark

THE NEW YORK POLYCLINIC
MEDICAL SCHOOL AND HOSPITAL

(Organized 1881)

(The Pioneer Post-Graduate Medical Institute in America)

SURGERY and ALLIED SUBJECTS

A two months full time combined surgical course comprising general surgery, traumatic surgery, abdominal surgery, gastroenterology, proctology, gynecological surgery, urological surgery. Attendance at lectures, witnessing operations, examination of patients preoperatively and postoperatively and follow up in the wards postoperatively. Pathology, radiology, physical medicine, anesthesia. Cadaver demonstrations in surgical anatomy, thoracic surgery, proctology, orthopedics. Operative surgery and operative gynecology on the cadaver. Attendance at departmental and general conferences.

RADIOLOGY

A comprehensive review of the physics and higher mathematics involved, film interpretation, all standard general roentgen diagnostic procedures, methods of application and doses of radiation therapy, both x-ray and radium, standard and special fluoroscopic procedures. A review of dermatological lesions and tumors susceptible to roentgen therapy is given, together with methods and dosage calculation of treatments. Special attention is given to the newer diagnostic methods associated with the employment of contrast media, such as bronchography with Lipiodol, uterosalpingography, visualization of cardiac chambers, perirenal insufflation and myelography. Discussions covering roentgen departmental management are also included; attendance at departmental and general conferences.

Course for GENERAL PRACTITIONERS

Intensive full time instruction covering those subjects which are of particular interest to the physician in general practice. Fundamentals of the various medical and surgical specialties designed as a practical review of established procedures and recent advances in medicine and surgery. Subjects related to general medicine are covered and the surgical departments participate in giving fundamental instruction in their specialties. Pathology and radiology are included. The class is expected to attend departmental and general conferences.

ANATOMY - SURGICAL

a. ANATOMY COURSE for those interested in preparing for Surgical Board Examination. This includes lectures and demonstrations together with supervised dissection on the cadaver.
b. SURGICAL ANATOMY for those interested in a general Refresher Course. This includes lectures with demonstrations on the dissected cadaver. Practical anatomical application is emphasized.
c. OPERATIVE SURGERY (cadaver). Lectures on applied anatomy and surgical technic of operative procedures. Matriculants perform operative procedures on cadaver under supervision.
d. REGIONAL ANATOMY for those interested in preparing for Subspecialty Board Examinations.

For Information concerning these and other Courses please Address:

THE DEAN, 345 West 50th St., New York 19, N. Y.

Complete
Printing and Binding Service

Commercial, Book and Job Work, Catalogues—Publications
Advertising Literature, Booklets—Broadsides
Office and Factory Forms
Loose-Leaf and Manifold Forms—Ledger Leaves and Loose-Leaf Binders
Paper Ruling
Complete Binding Equipment

Complete Service Under One Roof

Acquaint us with your requirements. We serve you efficiently and economically.

Dial 3-1881

WILLIAMS PRINTING CO.

11-13-15 North Fourteenth Street **RICHMOND, VIRGINIA**

proof of performance shown by proof of preference



Sealy's Accepted Posturepedic Mattress now*

WORLD'S LARGEST SELLING POSTUREPEDIC MATTRESS

To patients suffering from morning backache due to sleeping on an inferior mattress or improperly fitted bedboards, you may suggest the Sealy Posturepedic, with confidence.

*Accepted for advertising in the Journal of the American Medical Association, Sealy's Posturepedic is now the most widely used mattress of its type in the world. Since it is correctly *firm* it insures proper sleeping posture, gives natural support and complete comfort, too. For patients bothered by "low" morning backache, possibly caused by sleeping on a flabby mattress or make-shift bedboard, you may mention the Sealy Posturepedic *knowing* it is giving helpful relief in steadily increasing thousands of cases.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Sealy

SLEEPING ON A SEALY IS LIKE SLEEPING ON A CLOUD

SEALY MATTRESS COMPANY
Railroad Avenue, Bluefield, Va.
8 South Harvie Street, Richmond, Va.

THIS DR

is the **symbol**
of the
Standardized
Tablets
Quinidine Sulfate
Natural
0.2 Gram
(approx. 3 grains)
produced by
Davies, Rose & Co., Ltd.

By specifying the name, the physician will be assured that this standardized form of Quinidine Sulfate Natural will be dispensed to his patient.

Clinical samples sent to physicians on their request

Davies, Rose & Co., Ltd.
Boston 18, Mass.

Q4

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

For the
Discriminating
Eye Physician

Depend on the Services of a Guild Optician

in
Lynchburg, Virginia

A. G. JEFFERSON

Ground Floor **Allied Arts Bldg.**

Exlusively Optical

Every Virginia Doctor Should Have These Books!

The history of medicine in the Old Commonwealth from Jamestown to the beginning of the present century is a work every doctor should be proud to own. Complete and intensely interesting.

Medicine In Virginia

In 3 Volumes

Published under Auspices of
Medical Society of Virginia

Reduced price to members of the Medical Society of Virginia

3 Volumes for $5.75
(formerly $9.75)

Order through

Medical Society of Virginia
1105 West Franklin Street
Richmond, Virginia

At All

DEPENDABLE

PRESCRIPTION SERVICE

and

SERVICE TO PHYSICIANS

PATTERSON'S

SAFE SERVICE DRUG STORES

Prescription Specialists

Lynchburg, Va. **Martinsville, Va.**

Danville, Va. **Altavista, Va.**

Winston-Salem, N. C.

The State Board of Medical Examiners of Virginia

The next meeting of the Board will be held at Richmond Hotel, Richmond, Virginia December 6, 1955 and the examinations will be held at the same hotel December 7, 8 and 9. November 21, 1955 is the deadline for receipt of applications for the examination and documents and papers to be discussed and acted upon by the Board. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

In very special cases
A very superior Brandy



SPECIFY ★ ★ ★

HENNESSY

THE WORLD'S PREFERRED COGNAC BRANDY

84 PROOF Schieffelin & Company, New York, N.Y.

Results With

'ANTEPAR'®*

against **PINWORMS**

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against **ROUNDWORMS**

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

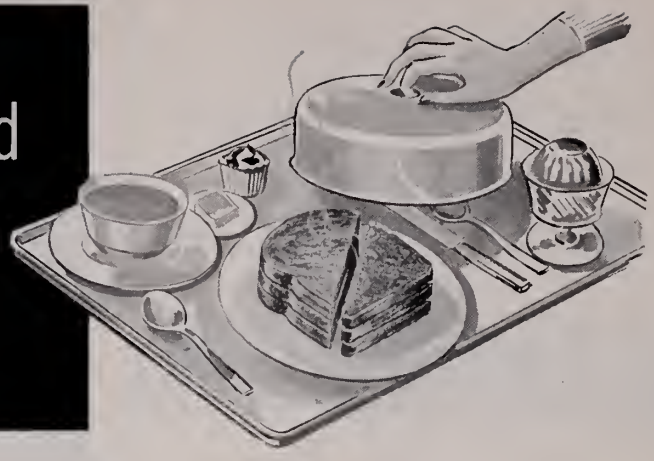
250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

Enriched Bread in Special Diets



THE many advantages of enriched bread in special diets are all too seldom recognized or appreciated. Hence, the physical, physiologic, nutritional, and dietetic values of enriched bread warrant detailed enumeration.

The open, soft texture of enriched bread enables its easy mastication, its ready absorption of digestive juices, and its prompt and thorough digestion. Reflexly, its appetizing eating qualities enhance the digestive processes. Since bread is free from coarse or harsh vegetable fiber, it proves nonirritating mechanically to the gastric and intestinal mucosa. In metabolism its minerals are neutral.

Enriched bread contains less than 0.2 per cent fibrous material, yielding insignificant amounts of indigestible residue. It contains only 3 per cent of fat, negligible amounts of purines, no cholesterol, and does not interfere with the digestive or absorptive processes. It contributes to a desirable texture of the food mass throughout the intestine. The contained nutrients are absorbed gradually.

Nutritionally, enriched bread supplies valuable amounts of biologically valuable protein, 8.5 per cent; easily digestible carbohydrate, essentially starch and dextrins, 52 per cent; and minerals, 1.8 per cent. Enriched bread provides notable amounts of vitamins and minerals: each 100 grams supplies on the average 0.24 mg. of thiamine, 0.15 mg. of riboflavin, 2.2 mg. of niacin, 88 mg. of calcium, 92 mg. of phosphorus, and 2.6 mg. of iron. Also it provides 275 calories of nutrient energy per 100 grams.

Enriched bread, in either fresh or toasted form, contributes to the eating pleasure of many other nutritious foods. Its neutral flavor permits it to blend well with other foods.

For these reasons, enriched bread enjoys a prominent place in a great variety of special diets—soft, low residue, low purine or cholesterol diets, general hospital diets, as well as diets low or high in carbohydrates, in proteins, or in calories.



The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

THE VIRGINIA BAKERS COUNCIL
IN CO-OPERATION WITH
THE AMERICAN BAKERS ASSOCIATION

THERAPEUTIC BILE

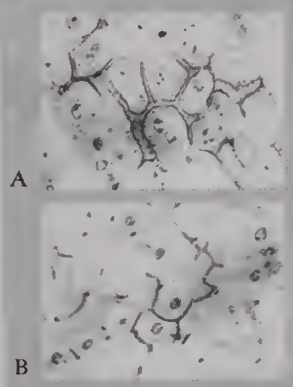
for patients with liver and gallbladder disorders

confirmed in the laboratory

In the isolated perfused liver (rat), *hydro*choleresis with *Decholin Sodium* increases bile flow 200 to 300 per cent—*with no increase in total solids.*[2]

(A) *Hydro*choleresis: Bile capillaries (rabbit liver) are filled with dilute bile 15 minutes after i.v. injection of sodium dehydrocholate.

(B) Untreated control.



Photomicrographs Demonstrate *Hydro*choleresis: Increased Secretion of Highly Dilute Bile[1]

confirmed in practice

"true hydrocholeresis —a marked increase both in volume and fluidity of the bile"[3]

"Since bile of this nature and in this large output can flush out even the smaller and more tortuous biliary radicles, hydrocholeresis [with *Decholin* and *Decholin Sodium*] aids in removal of inspissated material and combats infection."[3]

Decholin® – Decholin Sodium®

Decholin Tablets (dehydrocholic acid, *Ames*) 3¾ gr. (0.25 Gm.). *Decholin Sodium* (sodium dehydrocholate, *Ames*) 20% aqueous solution: ampuls of 3 cc., 5 cc. and 10 cc.

(1) Clara, M.: Med. Monatsschr. *7*:356, 1953. (2) Brauer, R. W., and Pessotti, R. L.: Science *115*:142, 1952. (3) Schwimmer, D.; Boyd, L. J., and Rubin, S. H.: Bull. New York M. Coll. *16*:102, 1953.

63255

AMES COMPANY, INC • ELKHART, INDIANA Ames Company of Canada, Ltd., Toronto

for strong, sturdy, solid growth

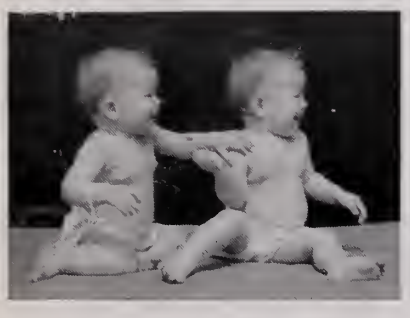
Lactum

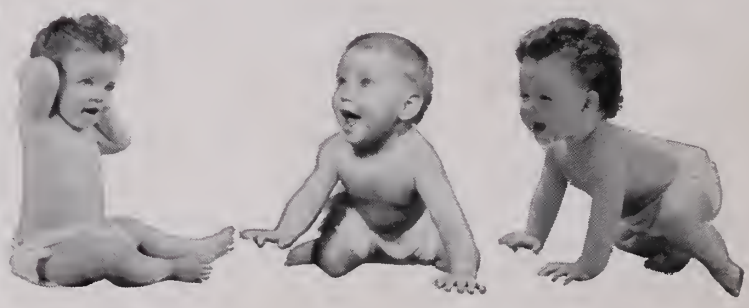


LIQUID OR
POWDERED

NUTRITIONALLY SOUND FORMULA FOR INFANTS

Lactum®-fed babies get all the proved benefits of a cow's milk and Dextri-Maltose® formula. Mothers appreciate the convenience and simplicity of this ready-prepared formula. Physicians are assured the important protein margin of safety for sturdy growth.





Lactum-fed babies are typically sturdy babies because Lactum supplies ample protein for sound growth and development.

The generous protein intake of babies fed milk and carbohydrate formulas such as Lactum promotes the formation of muscle mass. It also provides for good tissue turgor and excellent motor development.[1]

(1) Jeans, P. C., in A. M. A. Handbook of Nutrition, ed. 2, Philadelphia, Blakiston, 1951, pp. 275-278.

MEAD | SYMBOL OF SERVICE TO THE PHYSICIAN

MEAD JOHNSON & COMPANY · EVANSVILLE, INDIANA, U.S.A.

The New York Academy of Medicine

DUE IN TWO WEEKS UNLESS RENEWED.
NOT RENEWABLE AFTER 6 WEEKS.

DATE BORROWED	BORROWER
FEB 1 3 1964	
OCT 8 1968	Fuller Glaser